

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

GENERAL ADJUSTMENTS IN )  
ELECTRIC RATES OF ) CASE NO. 2005-00341  
KENTUCKY POWER COMPANY )

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DIRECT TESTIMONY OF MICHAEL J. MAJOROS, JR.  
ON BEHALF OF  
THE ATTORNEY GENERAL OF THE COMMONWEALTH OF KENTUCKY

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Date: January 9, 2005

Direct Testimony  
Of  
Michael J. Majoros, Jr.

1 **Introduction**

2 **Q. State your name, position, and business address.**

3 A. My name is Michael J. Majoros, Jr. I am Vice President of Snavelly King  
4 Majoros O'Connor & Lee, Inc. ("Snavelly King"), located at 1220 L Street, N.W.,  
5 Suite 410, Washington, D.C. 20005.

6 **Q. Describe Snavelly King.**

7 A. Snavelly King is an economic consulting firm founded in 1970 to conduct  
8 research on a consulting basis into the rates, revenues, costs and economic  
9 performance of regulated firms and industries. Snavelly King represents the  
10 interests of government agencies, businesses, and individuals who are  
11 consumers of telecom, public utility, and transportation services.

12 We have a professional staff of 12 individuals with backgrounds in  
13 economics, accounting, engineering and cost analysis. Most of our work  
14 involves the development, preparation and presentation of expert witness  
15 testimony before Federal and state regulatory agencies. Over the course of  
16 our 35-year history, members of the firm have participated in more than 1,000  
17 proceedings before almost all of the state commissions and all Federal  
18 commissions that regulate utilities or transportation industries.

19 **Q. Have you prepared a summary of your qualifications and experience?**

20 A. Yes, Appendix A is a summary of my qualifications and experience. Appendix  
21 B contains a tabulation of my appearances as an expert witness before state  
22 and Federal regulatory agencies.

23 **Q. For whom are you appearing in this proceeding?**

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1 A. I am appearing on behalf of the Attorney General of the Commonwealth of  
2 Kentucky (AG”).

3 **Subject and Purpose of Testimony**

4 **Q. What is the subject of your testimony?**

5 A. My testimony addresses depreciation.

6 **Q. What is the purpose of your testimony?**

7 A. The AG asked me to review Kentucky Power Company’s (“Kentucky Power” or  
8 “the Company”) depreciation proposals, express an opinion regarding their  
9 reasonableness, and make alternative recommendations if warranted.

10 **Prior Experience**

11 **Q. Do you have any specific experience in the field of public utility  
12 depreciation?**

13 A. Yes, I and other members of my firm specialize in the field of public utility  
14 depreciation. We have appeared as expert witnesses on this subject before  
15 the regulatory commissions of almost every state in the country. I have  
16 testified in over one hundred proceedings on the subject of public utility  
17 depreciation and represented various clients in several other proceedings in  
18 which depreciation was a settled issue prior to the submission of testimony. I  
19 have also negotiated on behalf of clients in fifteen of the Federal  
20 Communications Commission’s (“FCC”) Triennial Depreciation Represcription  
21 conferences.

22 **Q. Does your experience specifically include electric company  
23 depreciation?**

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1 A. Yes, I have appeared as an expert on the subject of electric company  
2 depreciation in over thirty proceedings. Depreciation was a settled issue in  
3 several other electric proceedings in which I prepared testimony.

4 **Q. Have you ever appeared before the Kentucky Public Service Commission**  
5 **(“KPSC”)?**

6 A. Yes, I have appeared before the KPSC on several occasions. Recently, I  
7 submitted testimony in Case No. 2005-00042, regarding the depreciation rates  
8 of Union Light, Heat and Power Company. The decision of the Commission in  
9 that case was issued by order dated December 22, 2005.

10 **Kentucky Power’s Present Depreciation Rates**

11 **Q. When were Kentucky Power’s present depreciation rates approved?**

12 A. The present depreciation rates were established as part of the settlement in  
13 Case No. 91-066. According to the Order in that case, “...Kentucky Power’s  
14 depreciation study and revised depreciation rates shall be [were] approved as  
15 filed...”<sup>1</sup>

16 **Q. How were the present depreciation rates calculated?**

17 A. They are straight-line remaining life depreciation rates.<sup>2</sup>

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<sup>1</sup> Case No. 91-066, *In the Matter of: Application for Adjustment of Electric Rates of Kentucky Power Company*, Order, Issued October 28, 1991, page 2.

<sup>2</sup> Direct Testimony of James E. Henderson (“Henderson Direct”), page 6.

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1 **Kentucky Power's Proposed Depreciation Rates**

2 **Q. Summarize Kentucky Power's depreciation rate proposals in this**  
3 **proceeding.**

4 **A.** Mr. James E. Henderson sponsors Kentucky Power's depreciation study. Mr.  
5 Henderson's proposals would increase annual depreciation expense by \$3.7  
6 million, relative to current depreciation rates based on December 31, 2004  
7 plant balances.<sup>3</sup> The table below summarizes Mr. Henderson's proposals and  
8 compares them to the present rates.

9 **Table 1**

**Comparison of Kentucky Power's Present and Proposed Accruals Based on  
Plant as of December 31, 2004<sup>4</sup>  
(\$000)**

	Present Rates <u>Total Accrual</u>	Proposed Rates			<u>Difference</u>
		<u>Capital Recovery Accrual</u>	<u>Cost of Removal Accrual</u>	<u>Total Accrual</u>	
Steam Production	\$ 17,713	\$ 13,262	\$ 2,952	\$ 16,215	(\$ 1,498)
Transmission	6,552	6,440	3,958	10,398	3,846
Distribution	15,394	9,060	6,848	15,908	514
General	<u>728</u>	<u>1,493</u>	<u>29</u>	<u>1,523</u>	<u>794</u>
Total	\$ 40,387	\$ 30,255	\$13,788	\$ 44,044	\$ 3,657

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11 **Q. Is Mr. Henderson making any new proposals?**

12 **A.** Yes, Mr. Henderson has three new proposals. First, Kentucky Power's current  
13 generating plant depreciation rates incorporate future cost of removal  
14 (decommissioning) estimates based on a 1990 study by Sargent & Lundy.  
15 The Company had a new study conducted by Brandenburg Industrial Service

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<sup>3</sup> Henderson Direct, page 4.

<sup>4</sup> Henderson Direct, page 4.

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1 Company which demonstrates that the old \$43.2 million estimate was vastly  
2 overstated. Mr. Henderson incorporated the new estimate in his proposed  
3 generating plant depreciation rates.

4 Second, Kentucky Power's current depreciation rates for Transmission,  
5 Distribution and General plant do not incorporate any future cost of removal  
6 estimates. Mr. Henderson's new proposals, however, incorporate a  
7 substantial amount of estimated future cost of removal.

8 Third, although Mr. Henderson proposes a longer life span for Big  
9 Sandy Unit 2, he did not extend the life span for Big Sandy Unit 1.

10 **Unbundled Depreciation Rates**

11 **Q. Have you included any additional versions of Mr. Henderson's proposed**  
12 **depreciation rates in your exhibits?**

13 A. Yes, Exhibit\_\_\_(MJM-1) shows Mr. Henderson's proposed depreciation rates  
14 unbundled into two rates which sum to his proposed depreciation rate for each  
15 account. I have shown Mr. Henderson's capital recovery rate and his future  
16 cost of removal rate for each account. I am providing these specifically  
17 identified depreciation rates in order to facilitate external reporting and for  
18 regulatory analysis and rate setting purposes. Unbundled depreciation rates  
19 provide new and better information and do not require any change to current  
20 accounting rules. It will provide the Commission and ratepayers with the ability  
21 to know how much they are paying for capital recovery versus future cost of  
22 removal.

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1 **Q. If they are unbundled, would you agree with all of Mr. Henderson's**  
2 **proposed depreciation rates?**

3 A. No. I also disagree with certain other aspects of Mr. Henderson's specific rate  
4 proposals. Regardless of that, Mr. Henderson's rates should be unbundled  
5 into two components as discussed above.

6 **Conclusions**

7 **Q. What are your conclusions?**

8 A. I conclude that even on an unbundled basis, Mr. Henderson's proposals result  
9 in *excessive depreciation* expense and charges to ratepayers. The excessive  
10 depreciation is caused by an understated life span for Big Sandy Unit 1 and  
11 overstated cost of removal factors. I base my conclusions on my depreciation  
12 study, my analysis, the new information brought to light by recent accounting  
13 pronouncements, and this Company's prior actions as a result of those recent  
14 accounting pronouncements. My recommended depreciation rates are set-  
15 forth in Exhibit\_\_\_(MJM-2) and summarized in the table below. My  
16 recommendations result in a \$7.2 million decrease in depreciation expense,  
17 based on December 31, 2004 plant balances.

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**Table 2**

**Comparison of Present and Snively King Recommended Accruals  
Based on Plant as of December 31, 2004<sup>5</sup>  
(\$000)**

	Present Rates <u>Total Accrual</u>	SK Recommended Rates			<u>Difference</u>
		Capital Recovery <u>Accrual</u>	Cost of Removal <u>Accrual</u>	Total <u>Accrual</u>	
Steam Production	\$ 17,713	\$ 13,023	\$ 1,224	\$ 14,247	(\$ 3,466)
Transmission	6,552	6,485	421	6,905	354
Distribution	15,394	8,929	1,542	10,470	( 4,923)
General	<u>728</u>	<u>1,493</u>	<u>24</u>	<u>1,517</u>	<u>789</u>
Total	\$ 40,387	\$ 29,930	\$ 3,210	\$ 33,140	(\$ 7,247)

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My proposal results a \$10.9 million downward swing from Mr. Henderson's \$3.7 million increase proposal.

5

6

**Q. What is the foundation of your conclusions and recommendations?**

7

A. I submitted data requests and reviewed the Company's responses thereto. I also reviewed Kentucky Power's responses to relevant Staff and other intervenor data requests. I referred to the most recent update to my firm's national study of electric production plant lives. This is included as Exhibit\_\_(MJM-3). I conducted an independent detailed service life study, which addresses lives and survivor curves. Due to its volume, I have extracted certain relevant pages from the study to provide the results. These pages are attached as Exhibit\_\_(MJM-4). The complete study is 620 pages and will be provided as workpapers. I also conducted a net salvage study which is attached as Exhibit\_\_(MJM-5).

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<sup>5</sup> Exhibit\_\_(MJM-2)

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1 **Excessive Depreciation**

2 Q. You have used the phrase “*excessive depreciation.*” Have you provided  
3 any background information on the concept of *excessive depreciation*?

4 A. Yes, an *excessive depreciation rate* is one that produces more depreciation  
5 expense than necessary to return the cost of a company’s capital asset over  
6 the life of the asset. Exhibit\_\_\_(MJM-6) is a brief summary of a landmark U.S.  
7 Supreme Court decision on depreciation. I am not an attorney and I do not  
8 present this as a legal argument or conclusion. I merely present this to  
9 demonstrate that the concept of *excessive depreciation* is not a new one.

10 I have also included in Exhibit\_\_\_(MJM-6) a discussion of, and  
11 quotations from, the Financial Accounting Standard Board’s (“FASB”)   
12 Statement of Financial Accounting Standard No. 143 (“SFAS No. 143”)   
13 demonstrating that the public accounting profession is also cognizant of and  
14 concerned about excessive depreciation.

15 Q. **Mr. Majoros, does the fact that accumulated depreciation reduces rate  
16 base render the concept of excessive depreciation moot?**

17 A. No, this is a straw-man argument put forth by many utility witnesses. If  
18 ratepayers are required to pay too much for depreciation expense, they will  
19 have paid too much. In the case of excessive depreciation, the Company has  
20 taken more of the ratepayer’s money than it should have. The fact that  
21 ratepayers are not required to pay a return on prior excessive charges does  
22 not mean that those charges were not excessive.  
23

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1 **Depreciation Concepts**

2 **Q. Does your testimony include a discussion of the depreciation concepts**  
3 **relevant to your testimony?**

4 A. Yes, Exhibit\_\_\_(MJM-7) is a brief discussion of depreciation concepts relevant  
5 to my testimony. I am submitting this discussion as a separate exhibit to  
6 minimize the technical aspects of my direct testimony. The depreciation  
7 concepts discussion may be helpful to understanding my testimony as well as  
8 Mr. Henderson's.

9 **New Accounting Rules**

10 **Q. Are there any new depreciation-related accounting rules been since the**  
11 **Company's last depreciation study?**

12 A. Yes, the Financial Accounting Standards Board's ("FASB") Statement of  
13 Financial Accounting Standard No. 143 ("SFAS No. 143") addresses asset  
14 retirement obligations ("AROs") associated with long-lived plant. If a utility has  
15 previously collected money in the form of future cost of removal embedded in  
16 depreciation rates, such as the Company's prior collections for its generating  
17 plant, but does not have a legal obligation to incur those costs, SFAS No. 143  
18 requires reporting of that excess as a regulatory liability.<sup>6</sup>

19 The Federal Energy Regulatory Commission's ("FERC") Order No. 631  
20 is that agency's implementation of SFAS No. 143 for regulatory purposes.  
21 FERC identified the excess amounts discussed above as "non-legal" asset

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<sup>6</sup> SFAS No. 143, paragraph B.73.

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1 retirement obligations, meaning that utilities do not have actual legal  
2 obligations and liabilities to incur these costs in the future. FERC requires  
3 separate identification of these amounts in sub-accounts of accumulated  
4 depreciation and depreciation expense.

5 **Q. Has Kentucky Power recognized any regulatory liabilities as a result of**  
6 **SFAS No. 143?**

7 A. Yes, Kentucky Power's 2004 SEC Form 10K reports a \$28.2 million cost of  
8 removal regulatory liability in compliance with SFAS No. 143.<sup>7</sup>

9 **Q. Explain the amount and the issue in non-technical language.**

10 A. Kentucky Power has collected \$28.2 million more from ratepayers than it has  
11 incurred for cost of removal. Current GAAP accounting rules require the \$28.2  
12 million excess collections be reported as amounts owed to ratepayers  
13 (regulatory liabilities) until they are spent on their intended purpose.  
14 Unfortunately, FERC Order No. 631 does not have a similar requirement.  
15 Therefore, for regulatory purposes, the \$28.2 million excess is currently  
16 recorded as a separate sub-component of account 108 – Accumulated  
17 Depreciation.

18 **Q. What caused this regulatory liability?**

19 A. The \$28.2 million regulatory liability is the result of including estimated  
20 decommissioning costs for generating plants in current depreciation rates.

21 **Q. Will Mr. Henderson's proposals increase the \$28.2 million regulatory**  
22 **liability?**

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<sup>7</sup> Kentucky Power Company 2004 10K Report, page H-12.

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1 A. Yes, although Mr. Henderson recognizes as a result of the new 2004 study  
2 that prior decommissioning costs were overstated, his proposed future cost of  
3 removal factors for the generating plant interim retirements, and the  
4 transmission, distribution and general plant functions will increase the \$28  
5 million regulatory liability by an exorbitant increment each year. Luckily, SFAS  
6 No. 143 and FERC Order No. 631 have recognized and highlighted the excess  
7 collections, and SFAS No. 143 requires reporting them as a regulatory liability  
8 for GAAP purposes.

9 **Q. Do any new issues emanate from the new accounting rules?**

10 A. The most important new issue is the need for the Kentucky Public Service  
11 Commission to hold the Company accountable for these excess advance  
12 collections by officially recognizing a regulatory liability. In my opinion, it  
13 should be reclassified from account 108-accumulated depreciation to account  
14 254-other regulatory liabilities, and from there, the Commission should require  
15 separate identification and reporting of these amounts.

16 **The KPSC Should Specifically Recognize the SFAS No. 143 Regulatory Liability**

17 **Q. How does GAAP define a regulatory liability?**

18 A. SFAS No. 71 – Accounting for the Effects of Certain Types of Regulation  
19 defines regulatory liabilities from a GAAP perspective. Paragraph 11  
20 (summarized below) defines a regulatory liability. Please pay particular  
21 attention to paragraphs 11 and 11 b.

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**SFAS No. 71 – Regulatory Liabilities**<sup>8</sup>

11. Rate actions of a regulator can impose a liability on a regulated enterprise. Such liabilities are usually obligations to the enterprise's customers. The following are the usual ways in which liabilities can be imposed and the resulting accounting:

a. A regulator may require refunds to customers. ...

b. A regulator can provide current rates intended to recover costs that are expected to be incurred in the future with the understanding that if those costs are not incurred future rates will be reduced by corresponding amounts. If current rates are intended to recover such costs and the regulator requires the enterprise to remain accountable for any amounts charged pursuant to such rates and not yet expended for the intended purpose, the enterprise shall not recognize as revenues amounts charged pursuant to such rates. Those amounts shall be recognized as liabilities and taken to income only when associated costs are incurred.

c. A regulator can require that a gain or other reduction of net allowable costs be given to customers over future periods. ...

**Q. Does Kentucky Power agree that its collections for non-legal AROs result in a regulatory liability?**

A. Yes, for GAAP and SEC reporting Kentucky Power agrees that its non-legal ARO collections represent an amount owed to ratepayers.

**Q. Have you made similar recommendations to the KPSC regarding cost of removal collections?**

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<sup>8</sup> SFAS No. 71, paragraph 11. Only the first sentence of each subparagraph is included.

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1 A. Yes, I made the same recommendations in Union Light, Heat and Power  
2 Company's recent gas rate case (No. 2005-00042). The Commission's  
3 December 22, 2005 order specifically addressed my recommendation.

4 **Q. Did the Commission adopt your recommendation in that case?**

5 A. No, it did not. The Commission stated the following:

6 The Commission is not persuaded by the AG's  
7 arguments. The AG has not demonstrated the need for this  
8 "transparent and enhanced reporting" and why it is  
9 necessary to establish a regulatory liability for the portion of  
10 accumulated depreciation related to net salvage. The AG  
11 presumes that excessive depreciation expense accruals  
12 exist because of his belief that the estimated cost of removal  
13 far exceeds the actual cost of removal. However, the AG  
14 has provided no analysis of plant retirements or removals  
15 that compare the estimated and actual costs. The AG also  
16 appears to have overlooked how the remaining life approach  
17 adjusts depreciation rates when there have been over-  
18 accruals. As defined in the Uniform System of Accounts,  
19 prescribed by FERC and adopted by this Commission,  
20 depreciation means the loss of service value not restored by  
21 current maintenance, incurred in connection with the  
22 consumption or prospective retirement of gas plant in the  
23 course of service from causes which are known to be in  
24 current operation and against which the utility is not  
25 protected by insurance. Service value means the difference  
26 between original cost and net salvage value of gas plant.  
27 The definition of depreciation is not the recovery of capital  
28 investment.<sup>9</sup>

29  
30 Therefore, the Commission finds that the AG's  
31 request to establish a regulatory liability should be denied.<sup>10</sup>  
32

33 **Q. Mr. Majoros, please address the Commission's concerns as expressed in**  
34 **that order regarding your recommendation in this case.**

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<sup>9</sup> Order, Case No. 2005-00042, *In the Matter of: An Adjustment of the Gas Rates of the Union Light, Heat and Power Company* Issued December 22, 2005, pages 36-37.

<sup>10</sup> Order, Case No. 2005-00042, Issued December 22, 2005, page 37.

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1 A. Exhibit\_\_(MJM-1) shows that Mr. Henderson is proposing to charge  
2 ratepayers \$13.8 million per year for cost of removal. My Exhibit\_\_(MJM-5)  
3 is my net salvage study which was, in turn, drawn from Mr. Henderson's study  
4 and responses to data requests. It provides, among other things, a historical  
5 analysis of the Company's actual cost of removal. The average from the most  
6 recent five years is \$3.2 million. It also demonstrates that the Company's net  
7 salvage has actually been positive \$8 thousand.

8           These data constitute the analysis the Commission said was missing  
9 from the Union Heat Light and Power case. This demonstrates directly that  
10 the Company proposes to charge ratepayers at least \$13.8 million each year  
11 for an expenditure that is only \$3.2 million on average. Given this, the  
12 Company must show why the excess collections should be allowed in rates.  
13 This Company has not done that. Furthermore, if a refundable regulatory  
14 liability is not recognized, the Company is not even held accountable for the  
15 excess collections.

16 **Q. Is there a need for transparent and enhanced reporting?**

17 A. The need for transparency and enhanced reporting has been addressed by  
18 the FERC as well as the Financial Accounting Standards Board and the  
19 Securities and Exchange Commission. Both SFAS No. 143 and FERC Order  
20 No. 631 provide transparency and enhanced reporting.

21 **Q. If the KPSC requires transparency and enhanced reporting, should it**  
22 **also specifically recognize a regulatory liability?**

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1 A. Even though Kentucky Power reports these collections as amounts owed to  
2 ratepayers for GAAP purposes, and separates the reserve for FERC  
3 accounting, it maintains that it does not owe the money back to ratepayers  
4 even if it does not incur the cost of removal it has collected. Kentucky Power  
5 maintains that all collections, even excess collections, belong to its  
6 shareholders simply because they are reported in accumulated depreciation.  
7 Kentucky Power considers accumulated depreciation to represent capital  
8 recovery and therefore to be its shareholders' property.

9 Therefore, the KPSC should specifically recognize a refundable  
10 regulatory liability because Kentucky Power intends to keep the money, even if  
11 it does not spend the money for cost of removal. Only this Commission can  
12 protect these amounts on behalf of Kentucky ratepayers.

13 Even though SFAS No. 143 and the SEC require recognition of these  
14 amounts as regulatory liabilities, the FERC left such recognition up to the  
15 states for regulatory purposes. Without such protection, Kentucky Power  
16 could absorb the unspent funds into its corporate income account, even if they  
17 will never be spent on cost of removal.

18 **Q. On what basis do you maintain that Kentucky Power intends to keep the**  
19 **money even if it does not spend it for cost of removal?**

20 A. The AG asked the Company this specific question in AG-1-168, attached as  
21 Exhibit\_\_\_(MJM-8). Below is a portion of the Company's response.

22 AG Request No. 168: With respect to the Regulatory  
23 Liability relating to asset cost of removal which you  
24 reclassified out of accumulated depreciation:

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- b. Do you agree that this amount is a refundable obligation to ratepayers until it is spent on its intended purpose (cost of removal)? If not, why not?
- h. Does Kentucky Power believe that amounts recorded in accumulated depreciation represent capital recovery? If not, why not?
- i. Whose capital is reflected in accumulated depreciation – shareholders’ or ratepayers’?

Response:

- b. No. The Company does not believe the approved collection of removal costs through depreciation rates creates a refundable obligation. The definition of depreciation provides that net salvage is to be considered in depreciation.
- h. Yes.
- i. The shareholder’s.

**Q. From this response, what do you conclude?**

A. Kentucky Power considers the excess collections to belong to shareholders and would transfer them into its income if the opportunity arises.

**Q. Do you have any indication that Kentucky Power would transfer these excess cost of removal amounts into income if the opportunity arises?**

A. Yes, I do. Kentucky Power’s parent company, American Electric Power Company, Inc. (“AEP”) did just that when several of its production plants were deregulated. AEP immediately transferred \$473 million relating to those deregulated plants from accumulated depreciation into its own income.<sup>11</sup>

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<sup>11</sup> AEP 2003 Annual Report to Shareholders, page 69.

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1 **Q. Have other electric utilities treated amounts recorded as accumulated**  
2 **depreciation as their own money and taken past collections for future**  
3 **cost of removal into their own income?**

4 A. Yes, that is exactly what other electric utilities did when their production plants  
5 were deregulated. For example, Tucson Electric Power Company ("TEP")  
6 stated that:

7                   TEP had accrued \$113 million for final  
8 decommissioning of its generating facilities.. ... this  
9 amount was reversed for 2002 and included as part of  
10 the cumulative effect adjustment of accounting  
11 adjustment when FAS 143 was adopted on January  
12 1, 2003.<sup>12</sup>

13  
14 This means that TEP transferred non-legal AROs into its own income.

15 **Q. If the opportunity arises, would TEP transfer even more non-legal AROs**  
16 **into its own income?**

17 A. Yes, TEP applies SFAS No. 71 - Accounting for the Effects of Certain Types of  
18 Regulation - to its regulated operations, which include the transmission and  
19 distribution portions of its business. As a result TEP recorded the cost of  
20 removal collected for regulated non-legal AROs as a regulatory liability.

21 According to TEP's December 31, 2004 10K Report:

22                   As of December 31, 2004, TEP had accrued \$67  
23 million for the net cost of removal of the interim  
24 retirements from its transmission, distribution and  
25 general plant. As of December 31, 2003, TEP had  
26 accrued \$60 million for these removal costs. The  
27 amount is recorded as a regulatory liability.<sup>13</sup>

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<sup>12</sup> Tucson Electric Power Company December 31, 2004 10 K Report, page K-59.

<sup>13</sup> Id., page K-60.

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1           However, also according to TEP's December 31, 2004 10K Report:

2                           If TEP stopped applying FAS 71 to its remaining  
3                           regulated operations, it would write off the related  
4                           balances of its regulatory assets as an expense and  
5                           its regulatory liabilities as income on its income  
6                           statement.<sup>14</sup>  
7

8   **Q.    Why is that language significant?**

9    A.    It provides TEP with an "out." If it can find a way to discontinue accounting  
10           under SFAS No. 71, TEP will transfer the rest of its excess collections into its  
11           corporate income.

12   **Q.    Does AEP have a similar statement in its 10K Report?**

13   A.    Yes, page A-76 of AEP's 2004 Form 10K states:

14                           For cost-based rate-regulated operations, the composite  
15                           depreciation rate generally includes a component for  
16                           nonasset retirement obligation (non-ARO) removal costs,  
17                           which is credited to accumulated depreciation. Actual  
18                           removal costs incurred are debited to accumulated  
19                           depreciation. *Any excess of accrued non-ARO removal*  
20                           *costs over actual removal costs incurred is reclassified from*  
21                           *accumulated depreciation and reflected as a regulatory*  
22                           *liability.* For nonregulated operations, non-ARO removal  
23                           costs are expensed as incurred.<sup>15</sup> (Emphasis added.)  
24

25           Page L-2 of AEP's 2004 Form 10K also states:

26                           ***Accounting for the Effects of Cost-Based Regulation***

27                           As cost-based rate-regulated electric public utility  
28                           companies, the Registrant Subsidiaries' financial statements  
29                           reflect the actions of regulators that result in the recognition  
30                           of revenues and expenses in different time periods than  
31                           enterprises that are not rate-regulated. In accordance with  
32                           SFAS 71, "Accounting for the Effects of Certain Types of  
33                           Regulation," regulatory assets (deferred expenses) and  
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<sup>14</sup> Id.

<sup>15</sup> AEP 2004 10K Report, page A-76.

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1 regulatory liabilities (future revenue reductions or refunds)  
2 are recorded to reflect the economic effects of regulation by  
3 matching expenses with their recovery through regulated  
4 revenues and income with its passage to customers through  
5 the reduction of regulated revenues. The following  
6 Registrant Subsidiaries discontinued the application of SFAS  
7 71 for the generation portion of their business as follows: in  
8 Ohio by OPCo and CSPCo in September 2000, in Virginia  
9 and West Virginia by APCo in June 2000, in Texas by TCC,  
10 TNC, and SWEPCo in September 1999, in Arkansas by  
11 SWEPCo in September 1999 and in the FERC jurisdiction  
12 for TNC in December 2003. During 2003, APCo reapplied  
13 SFAS 71 for its West Virginia generation operations and  
14 SWEPCo reapplied SFAS 71 for its Arkansas generation  
15 operations. SFAS 101, "Regulated Enterprises – Accounting  
16 for the Discontinuance of Application of FASB Statement No.  
17 71" requires the recognition of an impairment of a regulatory  
18 asset arising from the discontinuance of SFAS 71 be  
19 classified as an extraordinary item.<sup>16</sup>  
20

21 **Q. What does all of this mean?**

22 A. It means that the public accounting profession is aware that AEP has collected  
23 more than it needs for future cost of removal, and as long as it is regulated on  
24 a cost basis, the excess is a refundable liability to ratepayers. But, should the  
25 industry be deregulated, or even move to price regulation, the money drops to  
26 AEP's bottom line.

27 **Q. Have any other industries taken non-legal ARO amounts into income?**

28 A. Yes, while regulated, the telephone industry collected substantial amounts of  
29 future cost of removal through depreciation, just as Kentucky Power is  
30 proposing here. Upon deregulation and the adoption of SFAS No. 143, the

---

<sup>16</sup> AEP 2004 10K Report, page L-2.

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1 major telephone companies took \$11.5 billion from accumulated depreciation  
2 into net income.<sup>17</sup>

3 **Q. All of these examples appear to involve deregulation or partial**  
4 **deregulation. Is there any reason to be concerned about that for**  
5 **Kentucky Power as a regulated utility in a state that plans to continue to**  
6 **regulate its utilities?**

7 A. Yes, there are reasons to be concerned. First, Kentucky Power is a subsidiary  
8 of AEP. The generation portion of AEP's business has already been  
9 deregulated in many state jurisdictions as well as at the Federal level.  
10 Furthermore, Congress just passed the Energy Policy Act of 2005, which not  
11 only gutted, but overturned the protections provided by the Public Utility  
12 Holding Company Act of 1935. Then too, telephone companies are  
13 considering broadband over power lines and might consider purchases of  
14 electric distribution grids for that purpose. Were this to occur, suddenly  
15 regulated electric assets become deregulated telephone assets. One cannot  
16 continue to assume that regulated utilities will avoid the impact of other  
17 unregulated enterprises. Therefore, there are reasons to be concerned.

18 Notwithstanding these concerns, nothing holds Kentucky Power directly  
19 accountable for these excess collections from a regulatory standpoint.  
20 Kentucky Power's actual experience demonstrates it is not likely that it will  
21 incur cost of removal at the levels collected; but even if did, it is still fair and

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<sup>17</sup> Pre-tax gains of SBC (\$5.9 billion), Verizon (\$3.5 billion), Qwest (\$0.4 billion), BellSouth (\$1.3 billion) and Sprint (\$0.4 billion). See Companies' 2003 10K Reports and 2003 Annual Reports to Shareholders.

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1 reasonable for the KPSC to recognize the ratepayers' interest in these monies  
2 until actually spent on their intended purpose. Unless they are explicitly  
3 identified as "subject to refund," they are merely hidden potential income to  
4 Kentucky Power.

5 **Q. Does the remaining life depreciation technique solve the problem?**

6 A. No. The remaining life technique assumes perpetual cost-based regulation ad  
7 infinitum, but that assumption is no longer valid. Only recognition as a  
8 regulatory liability will protect the excess depreciation collections.

9 **Q. Would this change were the Company to need the excess collections for**  
10 **construction?**

11 A. In those circumstances, the excess collections should be specifically identified  
12 and charged and recorded in account 252-Customers advances for  
13 construction. They will also be subject to refund in that account.

14 **Q. Do you recommend that the KPSC require that Kentucky Power**  
15 **separately identify this regulatory liability in filings before it?**

16 A. Yes, the KPSC should require that Kentucky Power explicitly identify and  
17 report this regulatory liability and all related activity in all future reports, rate  
18 cases, and depreciation studies that it files with the KPSC. Furthermore, the  
19 KPSC's explicit recognition of this amount as a regulatory liability should be  
20 prominently disclosed in Kentucky Power's Form 1 reports.

21 **Q. Would it be sufficient to report the item as a "deferred credit?"**

22 A. No, treatment as a deferred credit would defeat the purpose. Kentucky Power  
23 could easily assert that ratepayers have no claim to a deferred credit.

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1 Kentucky Power could claim that a deferred credit is its money, not ratepayers'  
2 money. In order to protect ratepayers, the KPSC must officially recognize the  
3 item and Kentucky Power must report a regulatory liability for regulatory and  
4 ratemaking purposes.

5 **Q. What are your conclusions?**

6 A. My recommendations for specific recognition by the Commission of a  
7 regulatory liability for non-legal cost of removal and dismantlement amounts  
8 and the continued identification and reporting of such regulatory liability by  
9 Kentucky Power in its regulated reports does not harm the Company in any  
10 way. It does provide a level of protection for ratepayers that they are not  
11 currently receiving. This is a true win-win situation.

12 **Going-Forward Treatment of Future Cost of Removal**

13 **Q. Given the Commission's decision in the Union Heat Light and Power**  
14 **case, what is the appropriate going-forward treatment of cost of**  
15 **removal?**

16 A. If the Company is not to be held accountable for excess collections going-  
17 forward, the only reasonable solution is to keep the annual charges to  
18 ratepayers as close as possible to the Company's actual expenditures.

19 **Q. How would that be done?**

20 A. The cost of removal factors should be based on the most recent five-year  
21 average of actual cost of removal experience. This approach, combined with  
22 the remaining-life technique keeps the Company whole on a current basis, and  
23 reduces the amount excess collections charged to ratepayers.

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1 **Q. Have you calculated depreciation rates based on this approach?**

2 A. Yes, these calculations are included in Exhibit\_\_\_\_(MJM-5), and carried forward  
3 to my overall recommendations in Exhibit\_\_\_\_(MJM-2). As you can see, this  
4 approach still provides the unbundling I discussed earlier, but does not provide  
5 such an exorbitant advance payment to the Company each year. At the same  
6 time, the Company is kept more than whole on a going-forward basis.

7 **Production Plant Life Span Depreciation Rate Calculations**

8 **Q. How did Mr. Henderson estimate his service life for Production Plant?**

9 A. Mr. Henderson used the life span method for Production plant.

10 **Q. Please explain the life span method in more detail.**

11 A. The life span method is actually a procedure to estimate an average service  
12 life and average remaining life for a property group. It is based on the  
13 assumption that a property group is comprised of a small number of large units  
14 subject to concurrent terminal (final) retirement. The period between the  
15 original installation and the terminal retirement date is the life span. The  
16 period between the study date and the terminal retirement date is the  
17 remaining life span. The life span method also recognizes "interim" additions  
18 and retirements prior to the terminal date. Importantly, however, future interim  
19 additions are not considered in the depreciation base or depreciation rate until  
20 they occur.<sup>18</sup> Given the ease of visualizing a concurrent final retirement of  
21 major structures, the life span method has obvious intuitive appeal. The  
22 method also has limitations and strenuous rules for its application.

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<sup>18</sup> NARUC Public Utility Depreciation Practices Manual, 1996, p. 142.

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1 **Q. Is the fundamental life span assumption of a concurrent terminal**  
2 **retirement always valid?**

3 A. Not necessarily. I have discovered problems with the life span method. For  
4 example, in the early 1990's I visited a major water treatment plant where the  
5 structures and treatment process were being upgraded. A few years later I  
6 revisited the same plant and discovered that a majority of the original  
7 structures were still in service. They had merely been modernized and  
8 expanded. A final retirement assumption was inappropriate because the  
9 treatment plant is fundamental and critical to the operation of that Company.  
10 The most reasonable depreciation assumption was that the plant will be well  
11 maintained and upgraded as long as the water it treats continues to flow.

12 I have also visited electric plants that have had partial final retirements  
13 of structures only to find that the space would be reused as offices or training  
14 centers. A specific terminal retirement year estimate was specious in those  
15 circumstances. A supportable average service life assumption based on the  
16 flow of dollars in and out of the accounts was much more reasonable.

17 **Q. What terminal retirement years is Mr. Henderson proposing for his**  
18 **production plant investment?**

19 A. Mr. Henderson has proposed retirement dates of 2015 for Big Sandy Plant  
20 Unit 1 and 2034 for Unit 2. These retirement years result in life spans of 52

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1 years for Unit 1 and 65 years for Unit 2. According to Mr. Henderson, AEP  
2 provided the retirement dates.<sup>19</sup>

3 **Q. Are these terminal retirement years and remaining life spans realistic?**

4 A. Mr. Henderson's life span of 65 years for Unit 2 is realistic for a steam  
5 production plant. In making this determination, I relied on a National Study of  
6 U.S. Steam Generating Unit Lives – 50 MW and Greater ("National Study")  
7 conducted by my firm. This study, included as Exhibit\_\_\_(MJM-3), uses  
8 analytical techniques generally accepted in the utility industry and a database  
9 maintained by the U.S. Department of Energy.<sup>20</sup> The study concludes that  
10 U.S. Steam Generating Units 50 MW or greater are experiencing average life  
11 spans of approximately 60 years and that these spans are lengthening almost  
12 on a year-to-year basis.

13 **Q. What about Unit 1?**

14 A. I do not agree with the proposed retirement date and resulting life span for Unit  
15 1.

16 **Q. How did the Company select the retirement dates for Big Sandy?**

17 A. The proposed retirement dates appear to have been selected based on  
18 environmental reasons. Page 2 of Mr. Henderson's workpapers states, "AEP  
19 recently announced plans to install flue gas desulfurization (FGD) equipment  
20 to reduce sulfur dioxide emissions on Unit 2 at Big Sandy Plant. This

---

<sup>19</sup> Exhibit JEH-1, pages 2-3.

<sup>20</sup>The study is an actuarial retirement rate analysis, using the Energy Information Agency's Form 860 data base of aged generating unit retirements and exposures. A full band (1900-2000) and both rolling band and shrinking band analyses were conducted.

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1 additional investment in pollution control equipment is expected to result in  
2 operating Unit 2 to year 2034. There are currently no plans to install FGD  
3 equipment on Unit 1. Due to environmental constraints, the current plans are  
4 to retire Unit 1 in year 2015.”<sup>21</sup>

5 **Q. Did Kentucky Power provide a reason for not installing the FGD**  
6 **equipment on Unit 1?**

7 A. No. I have attached the responses to several data requests concerning this  
8 issue as Exhibit\_\_\_(MJM-9). Kentucky Power has offered no support for its  
9 decision. In particular, the Company notes, “At this time, there are no  
10 analyses or other documents addressing the replacement of Big Sandy 1  
11 capacity in 2015.”<sup>22</sup>

12 **Q. What do you conclude?**

13 A. I conclude that the terminal retirement date for Unit 1 should be extended to  
14 2028. This conclusion is based on a 65-year life span from the installation  
15 date of 1963, which is the same life span Kentucky Power is assuming for Unit  
16 2. This conclusion is also supported by my national study. In fact, based on  
17 my experience and my study, I believe that Big Sandy Unit 1 may very well last  
18 more than 65 years. Mr. Henderson has failed to prove that Big Sandy will  
19 retire early. A lack of plans to install FGD equipment is not a good reason to  
20 move a retirement date forward.

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<sup>21</sup> Henderson Depreciation Study workpapers, page 2 of 443.

<sup>22</sup> Response to KIUC Data Request No. 2-4. See Exhibit\_\_\_(MJM-9).

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1 **Q. Have you calculated new remaining lives for Big Sandy Unit 1 based on**  
2 **your recommended retirement date?**

3 A. Yes, my remaining life calculations are included in Exhibit\_\_\_\_(MJM-4).

4 **Snavely King Life Analysis Approach For Mass Property**

5 **Q. What was your approach to analyzing Kentucky Power's lives and curves**  
6 **in the Transmission, Distribution and General functions?**

7 A. I began by reviewing Mr. Henderson's study. I analyzed each account using  
8 the retirement rate and/or simulated plant record ("SPR"), and geometric mean  
9 turnover ("GMT") methods. I also reviewed the Company's responses to data  
10 requests to obtain any additional information that would impact my analysis.

11 **Q. What was the result of your analyses?**

12 A. Based on my analyses, I conclude that the lives proposed by Mr. Henderson  
13 are reasonable. As such, I do not recommend any changes to his lives for  
14 Transmission, Distribution and General plant.

15 **Reserves**

16 **Q. How does Kentucky Power maintain its book reserves?**

17 A. Kentucky Power currently applies its depreciation rates, and maintains its book  
18 reserves at the functional level.

19 **Q. Has Mr. Henderson put forth any recommendations regarding this**  
20 **policy?**

21 A. Yes. Mr. Henderson recommends that the Company begin applying  
22 depreciation rates at the plant account level. He also recommends  
23 maintaining the book reserves at that level.

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1 **Q. How has Mr. Henderson calculated the book reserve by plant account for**  
2 **use in his rate calculations?**

3 A. Mr. Henderson allocated the functional book reserve based on the theoretical  
4 reserve for each account.

5 **Q. Have you reallocated the reserves using theoretical reserves based on**  
6 **your recommended parameters?**

7 A. Yes. The depreciation rates I have calculated reflect the allocation of book  
8 reserves based on my capital recovery theoretical reserves.

9 **Recommended Depreciation Rates**

10 **Q. Have you provided your recommended depreciation rates?**

11 A. Yes, my recommended depreciation rates are included in Exhibit\_\_\_\_(MJM-2).  
12 I am recommending two rates for each account: capital recovery and cost of  
13 removal. The two rates sum to the single rate which I have included for ease  
14 of calculating revenue requirement effects. But, as I explained throughout this  
15 testimony, it is imperative that the Commission require the separate rate for  
16 cost of removal.

17 **Summary of Recommendations**

18 **Q. Mr. Majoros, please summarize your recommendations.**

19 A. I recommend that the KPSC specifically recognize the refundable regulatory  
20 liability resulting from Kentucky Power's collection of excessive non-legal ARO  
21 charges. The KPSC should recognize this as a regulatory liability for  
22 regulatory reporting, regulatory analysis, and ratemaking purposes in  
23 Kentucky. It should require separate capital recovery versus cost of removal

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1 depreciation rates. I recommend extending the terminal retirement date for  
2 Big Sandy Unit 1 to 2028. I have accepted Mr. Henderson's proposed  
3 retirement date of 2034 for Unit 2, as well as all of Mr. Henderson's proposed  
4 lives for Transmission, Distribution and General plant.

5 **Q. Does this conclude your testimony?**

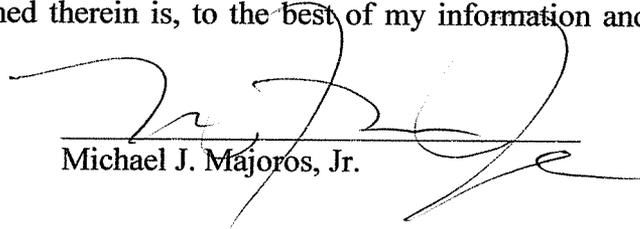
6 **A.** Yes, it does.

7

Washington, )  
: ss.  
District of Columbia )

**AFFIDAVIT**

I, Michael J. Majoros, Jr., hereby swear and affirm that the foregoing testimony and any accompanying exhibits were prepared by me or under my direction and that the information contained therein is, to the best of my information and belief, true and correct.

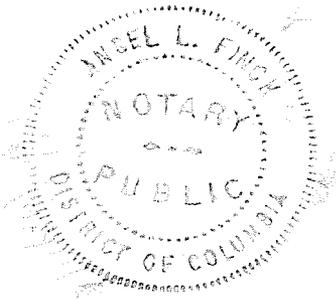
  
\_\_\_\_\_  
Michael J. Majoros, Jr.

Washington,  
District of Columbia

Subscribed and sworn to before me this 9<sup>th</sup> day of January, 2006, by  
Michael J. Majoros, Jr.

  
\_\_\_\_\_  
Notary Public

My Commission Expires: 3-14-06



**Exhibit \_\_\_\_ (MJM-1)**

**Split of Company Proposed Rates**

**Into**

**Capital Recovery and Cost of Removal Rates**

KENTUCKY POWER COMPANY  
SEPARATION OF COMPANY PROPOSED RATES INTO CAPITAL RECOVERY AND COST OF REMOVAL  
BASED ON PLANT IN SERVICE AT DECEMBER 31, 2004

ACCOUNT		ORIGINAL	CAPITAL RECOVERY		COST OF REMOVAL		COMBINED	
NO.	TITLE	COST AT	ANNUAL	ACCRUAL	ANNUAL	ACCRUAL	ANNUAL	ACCRUAL
(1)	(2)	12/31/2004	ACCRUAL	RATE	ACCRUAL	RATE	ACCRUAL	RATE
		(3)	(4)	(5)=(4)*(3)	(6)	(7)=(6)*(3)	(8)=(4)+(6)	(9)=(5)+(7)
<b>STEAM PRODUCTION PLANT</b>								
BIG SANDY PLANT								
311.0	Structures & Improvements	\$ 36,149,758	\$ 843,613	2.33%	\$ 1,168	0.00%	\$ 844,781	2.34%
312.0	Boiler Plant Equipment	324,538,695	10,136,700	3.12%	2,576,077	0.79%	12,712,778	3.92%
314.0	Turbogenerator Units	73,038,983	1,828,450	2.50%	349,796	0.48%	2,178,246	2.98%
315.0	Accessory Electrical Equipment	13,742,601	292,504	2.13%	11,095	0.08%	303,599	2.21%
316.0	Misc. Power Plant Equip.	6,518,954	160,908	2.47%	14,066	0.22%	174,974	2.68%
	<b>Total Steam Production Plant</b>	<b>453,988,991</b>	<b>13,262,175</b>	<b>2.92%</b>	<b>2,952,202</b>	<b>0.65%</b>	<b>16,214,378</b>	<b>3.57%</b>
<b>TRANSMISSION PLANT</b>								
350.1	Land Rights	23,258,047	334,440	1.44%	-	0.00%	334,440	1.44%
352.0	Structures & Improvements	6,387,065	110,646	1.73%	17,605	0.28%	128,251	2.01%
353.0	Station Equipment	123,153,116	1,853,432	1.50%	1,427,744	1.16%	3,281,176	2.66%
354.0	Towers & Fixtures	92,364,356	1,607,660	1.74%	913,723	0.99%	2,521,383	2.73%
355.0	Poles & Fixtures	37,506,208	970,842	2.59%	791,939	2.11%	1,762,780	4.70%
356.0	OH Conductor & Devices	100,355,481	1,559,698	1.55%	807,235	0.80%	2,366,933	2.36%
356.0	Underground Conduit	11,590	375	3.23%	-	0.00%	375	3.23%
358.0	Underground Conductor	106,066	2,678	2.53%	-	0.00%	2,678	2.53%
	<b>Total Transmission Plant</b>	<b>383,141,929</b>	<b>6,439,771</b>	<b>1.68%</b>	<b>3,958,246</b>	<b>1.03%</b>	<b>10,398,016</b>	<b>2.71%</b>
<b>DISTRIBUTION PLANT</b>								
360.1	Land Rights	3,691,802	47,957	1.30%	-	0.00%	47,957	1.30%
361.0	Structures & Improvements	4,231,065	52,432	1.24%	7,457	0.18%	59,889	1.42%
362.0	Station Equipment	42,017,840	695,349	1.65%	683,693	1.63%	1,379,043	3.28%
364.0	Poles, Towers, & Fixtures	124,672,243	2,118,696	1.70%	4,019,690	3.22%	6,138,387	4.92%
365.0	Overhead Conductor & Devices	99,426,561	1,732,820	1.74%	884,185	0.89%	2,617,004	2.63%
366.0	Underground Conduit	2,959,899	58,747	1.98%	-	0.00%	58,747	1.98%
367.0	Underground Conductor	5,482,068	87,407	1.59%	-	0.00%	87,407	1.59%
368.0	Line Transformers	84,185,422	1,529,895	1.82%	613,001	0.73%	2,142,895	2.55%
369.0	Services	31,239,944	1,190,295	3.81%	-	0.00%	1,190,295	3.81%
370.0	Meters	21,071,793	656,604	3.12%	103,496	0.49%	760,100	3.61%
371.0	Installations on Custs. Prem.	15,598,882	776,934	4.98%	507,556	3.25%	1,284,489	8.23%
373.0	Street Lighting & Signal Sys.	2,741,234	112,499	4.10%	29,100	1.06%	141,599	5.17%
	<b>Total Distribution Plant</b>	<b>437,318,753</b>	<b>9,059,634</b>	<b>2.07%</b>	<b>6,848,178</b>	<b>1.57%</b>	<b>15,907,812</b>	<b>3.64%</b>
<b>GENERAL PLANT</b>								
389.2	Land Rights	84,011	1,200	1.43%	-	0.00%	1,200	1.43%
390.0	Structures & Improvements	19,295,997	988,140	5.12%	29,460	0.15%	1,017,600	5.27%
391.0	Office Furniture & Equipment	1,737,579	56,903	3.27%	-	0.00%	56,903	3.27%
392.0	Transportation Equipment	5,819	310	5.33%	-	0.00%	310	5.33%
393.0	Stores Equipment	189,262	7,378	3.90%	-	0.00%	7,378	3.90%
394.0	Tools Shop & Garage Equipment	1,711,318	58,438	3.41%	-	0.00%	58,438	3.41%
395.0	Laboratory Equipment	394,394	24,381	6.18%	-	0.00%	24,381	6.18%
396.0	Power Operated Equipment	5,931	914	15.41%	-	0.00%	914	15.41%
397.0	Communication Equipment	4,666,769	320,126	6.86%	-	0.00%	320,126	6.86%
398.0	Miscellaneous Equipment	584,684	35,473	6.07%	-	0.00%	35,473	6.07%
	<b>Total General Plant</b>	<b>28,675,764</b>	<b>1,493,263</b>	<b>5.21%</b>	<b>29,460</b>	<b>0.10%</b>	<b>1,522,723</b>	<b>5.31%</b>
	<b>Total Depreciable Plant</b>	<b>\$ 1,303,125,437</b>	<b>\$ 30,254,843</b>	<b>2.32%</b>	<b>\$ 13,788,084</b>	<b>1.06%</b>	<b>\$ 44,042,929</b>	<b>3.38%</b>

Sources:

Col. (3) from Exhibit JEH-1, Schedule 1.

Col. (4) from page 2.

Col. (6) from page 3.

KENTUCKY POWER COMPANY  
CALCULATION OF COMPANY PROPOSED CAPITAL RECOVERY RATE  
BASED ON PLANT IN SERVICE AT DECEMBER 31, 2004

ACCOUNT		ORIGINAL	BOOK	GROSS	FUTURE	AVERAGE LIFE	AVERAGE	CAPITAL RECOVERY	
NO.	TITLE	COST AT	RESERVE	SALVAGE	ACCURUALS	AND	REMAINING	ANNUAL	ACCRUAL
(1)	(2)	12/31/2004	LESS COR	RATIO	(6)=[(3)*(5)]-(4)	CURVE TYPE	LIFE	ACCURUAL	RATE
		(3)	(4)	(5)		(7)	(8)	(9)=(6)/(8)	(10)=(9)*(3)
<b>STEAM PRODUCTION PLANT</b>									
BIG SANDY PLANT									
311.0	Structures & Improvements	\$ 36,149,758	\$ 14,142,316	1.00	\$ 21,917,068	FCST.	25.98	\$ 843,613	2.33%
312.0	Boiler Plant Equipment	324,538,695	87,536,069	0.96	224,021,079	FCST.	22.10	10,136,700	3.12%
314.0	Turbogenerator Units	73,038,983	29,323,706	0.97	41,524,107	FCST.	22.71	1,828,450	2.50%
315.0	Accessory Electrical Equipment	13,742,601	6,055,634	0.99	7,549,541	FCST.	25.81	292,504	2.13%
316.0	Misc. Power Plant Equip.	6,518,954	2,464,864	0.99	3,988,901	FCST.	24.79	160,908	2.47%
	<b>Total Steam Production Plant</b>	<b>453,988,991</b>	<b>139,522,588</b>		<b>299,000,695</b>			<b>13,262,175</b>	<b>2.92%</b>
<b>TRANSMISSION PLANT</b>									
350.1	Land Rights	23,258,047	5,181,575	1.00	18,076,472	75 R4.0	54.05	334,440	1.44%
352.0	Structures & Improvements	6,387,065	1,734,110	0.90	4,014,249	55 S3.0	36.28	110,646	1.73%
353.0	Station Equipment	123,153,116	24,094,424	0.65	55,955,102	40 R1.5	30.19	1,853,432	1.50%
354.0	Towers & Fixtures	92,364,356	35,485,349	1.00	56,879,007	55 R4.0	35.38	1,607,660	1.74%
355.0	Poles & Fixtures	37,506,208	14,516,677	1.00	22,989,531	35 S6.0	23.68	970,842	2.59%
356.0	OH Conductor & Devices	100,355,481	31,808,967	0.80	48,475,418	50 S6.0	31.08	1,559,698	1.55%
356.0	Underground Conduit	11,590	4,557	1.00	7,033	37 R2.0	18.76	375	3.23%
358.0	Underground Conductor	106,066	30,002	1.00	76,064	44 R1.0	28.40	2,678	2.53%
	<b>Total Transmission Plant</b>	<b>383,141,929</b>	<b>112,855,660</b>		<b>206,472,876</b>			<b>6,439,771</b>	<b>1.68%</b>
<b>DISTRIBUTION PLANT</b>									
360.1	Land Rights	3,691,802	1,521,740	1.00	2,170,062	75 R4.0	45.25	47,957	1.30%
361.0	Structures & Improvements	4,231,065	832,942	0.90	2,975,016	70 L1.5	56.74	52,432	1.24%
32.0	Station Equipment	42,017,840	12,354,632	0.65	14,956,964	30 R0.5	21.51	695,349	1.65%
364.0	Poles, Towers, & Fixtures	124,672,243	50,791,264	0.75	42,712,918	28 R0.5	20.16	2,118,696	1.70%
365.0	Overhead Conductor & Devices	99,426,561	20,684,820	0.60	38,971,116	30 R0.5	22.49	1,732,820	1.74%
366.0	Underground Conduit	2,959,899	502,532	1.00	2,457,367	50 R1.0	41.83	58,747	1.98%
367.0	Underground Conductor	5,482,068	627,688	0.85	4,032,070	53 R0.5	46.13	87,407	1.59%
368.0	Line Transformers	84,185,422	18,995,426	0.60	31,515,827	29 R0.5	20.60	1,529,895	1.82%
369.0	Services	31,239,944	7,199,752	0.85	19,354,200	22 R0.5	16.26	1,190,295	3.81%
370.0	Meters	21,071,793	8,066,030	0.70	6,684,225	20 R3.0	10.18	656,604	3.12%
371.0	Installations on Custs. Prem.	15,598,882	3,755,890	0.70	7,163,328	12 L0.0	9.22	776,934	4.98%
373.0	Street Lighting & Signal Sys.	2,741,234	877,496	0.90	1,589,614	20 L0.0	14.13	112,499	4.10%
	<b>Total Distribution Plant</b>	<b>437,318,753</b>	<b>126,210,213</b>		<b>174,582,708</b>			<b>9,059,634</b>	<b>2.07%</b>
<b>GENERAL PLANT</b>									
389.2	Land Rights	84,011	5,029	1.00	78,982	75 R4.0	65.80	1,200	1.43%
390.0	Structures & Improvements	19,295,997	4,035,838	0.88	12,944,640	25 L2.0	13.10	988,140	5.12%
391.0	Office Furniture & Equipment	1,737,579	188,681	1.00	1,548,898	35 R0.5	27.22	56,903	3.27%
392.0	Transportation Equipment	5,819	1,531	1.00	4,288	30 R3.0	13.83	310	5.33%
393.0	Stores Equipment	189,262	22,965	1.00	166,297	30 L0.0	22.54	7,378	3.90%
394.0	Tools Shop & Garage Equipment	1,711,318	128,220	1.00	1,583,098	32 L0.0	27.09	58,438	3.41%
395.0	Laboratory Equipment	394,394	126,446	1.00	267,948	32 S5.0	10.99	24,381	6.18%
396.0	Power Operated Equipment	5,931	905	1.00	5,026	8 SQ	5.50	914	15.41%
397.0	Communication Equipment	4,666,769	957,217	0.90	3,242,875	19 S6.0	10.13	320,126	6.86%
398.0	Miscellaneous Equipment	584,684	65,719	1.00	518,965	19 L2.0	14.63	35,473	6.07%
	<b>Total General Plant</b>	<b>28,675,764</b>	<b>5,532,552</b>		<b>20,361,015</b>			<b>1,493,263</b>	<b>5.21%</b>
	<b>Total Depreciable Plant</b>	<b>\$ 1,303,125,437</b>	<b>\$ 384,121,013</b>		<b>\$ 700,417,294</b>			<b>\$ 30,254,843</b>	<b>2.32%</b>

Sources:

Cols. (3), (7) & (8) from Exhibit JEH-1, Schedule 1.

Col. (4) from page 4.

Col. (5) for Production from ProductionAnalysis.xls (response to AG 1-105, SK split of gross salvage and COR). T, D & G from Exhibit JEH-1, Schedule III.

KENTUCKY POWER COMPANY  
CALCULATION OF COMPANY PROPOSED COST OF REMOVAL RATE  
BASED ON PLANT IN SERVICE AT DECEMBER 31, 2004

ACCOUNT		ORIGINAL	HENDERSON	HENDERSON	TOTAL	FUTURE	AVERAGE	COST OF REMOVAL	
NO.	TITLE	COST AT	INFLATED	INFLATED	COR IN	ACCRUALS	REMAINING	ANNUAL	ACCRUAL
(1)	(2)	12/31/2004	FUTURE	FUTURE	RESERVE	(7)=(5)-(6)	LIFE	ACCRUAL	RATE
		(3)	COR %	COR \$	(6)	(7)=(5)-(6)	(8)	(9)=(6)/(8)	(10)=(9)*(3)
<b>STEAM PRODUCTION PLANT</b>									
BIG SANDY PLANT									
311.0	Structures & Improvements	\$ 36,149,758	1.08	\$ 2,891,981	\$ 2,861,644	\$ 30,337	25.98	\$ 1,168	0.00%
312.0	Boiler Plant Equipment	324,538,695	1.23	74,643,900	17,712,590	56,931,310	22.10	2,576,077	0.79%
314.0	Turbogenerator Units	73,038,983	1.19	13,877,407	5,933,540	7,943,867	22.71	349,796	0.48%
315.0	Accessory Electrical Equipment	13,742,601	1.11	1,511,686	1,225,334	286,352	25.81	11,095	0.08%
316.0	Misc. Power Plant Equip.	6,518,954	1.13	847,464	498,756	348,708	24.79	14,066	0.22%
	Total Steam Production Plant	453,988,991		93,772,437	28,231,864	65,540,574		2,952,202	0.65%
<b>TRANSMISSION PLANT</b>									
350.1	Land Rights	23,258,047	1.00	-	-	-	54.05	-	0.00%
352.0	Structures & Improvements	6,387,065	1.10	638,707	-	638,707	36.28	17,605	0.28%
353.0	Station Equipment	123,153,116	1.35	43,103,591	-	43,103,591	30.19	1,427,744	1.16%
354.0	Towers & Fixtures	92,364,356	1.35	32,327,525	-	32,327,525	35.38	913,723	0.99%
355.0	Poles & Fixtures	37,506,208	1.50	18,753,104	-	18,753,104	23.68	791,939	2.11%
356.0	OH Conductor & Devices	100,355,481	1.25	25,088,870	-	25,088,870	31.08	807,235	0.80%
356.0	Underground Conduit	11,590	1.00	-	-	-	18.76	-	0.00%
358.0	Underground Conductor	106,066	1.00	-	-	-	28.40	-	0.00%
	Total Transmission Plant	383,141,929		119,911,796	-	119,911,796		3,958,246	1.03%
<b>DISTRIBUTION PLANT</b>									
360.1	Land Rights	3,691,802	1.00	-	-	-	45.25	-	0.00%
361.0	Structures & Improvements	4,231,065	1.10	423,107	-	423,107	56.74	7,457	0.18%
362.0	Station Equipment	42,017,840	1.35	14,706,244	-	14,706,244	21.51	683,693	1.63%
364.0	Poles, Towers, & Fixtures	124,672,243	1.65	81,036,958	-	81,036,958	20.16	4,019,690	3.22%
365.0	Overhead Conductor & Devices	99,426,561	1.20	19,885,312	-	19,885,312	22.49	884,185	0.89%
366.0	Underground Conduit	2,959,899	1.00	-	-	-	41.83	-	0.00%
367.0	Underground Conductor	5,482,068	1.00	-	-	-	46.13	-	0.00%
368.0	Line Transformers	84,185,422	1.15	12,627,813	-	12,627,813	20.60	613,001	0.73%
369.0	Services	31,239,944	1.00	-	-	-	16.26	-	0.00%
370.0	Meters	21,071,793	1.05	1,053,590	-	1,053,590	10.18	103,496	0.49%
371.0	Installations on Custs. Prem.	15,598,882	1.30	4,679,665	-	4,679,665	9.22	507,556	3.25%
373.0	Street Lighting & Signal Sys.	2,741,234	1.15	411,185	-	411,185	14.13	29,100	1.06%
	Total Distribution Plant	437,318,753		134,823,873	-	134,823,873		6,848,178	1.57%
<b>GENERAL PLANT</b>									
389.2	Land Rights	84,011	1.00	-	-	-	65.80	-	0.00%
390.0	Structures & Improvements	19,295,997	1.02	385,920	-	385,920	13.10	29,460	0.15%
391.0	Office Furniture & Equipment	1,737,579	1.00	-	-	-	27.22	-	0.00%
392.0	Transportation Equipment	5,819	1.00	-	-	-	13.83	-	0.00%
393.0	Stores Equipment	189,262	1.00	-	-	-	22.54	-	0.00%
394.0	Tools Shop & Garage Equipment	1,711,318	1.00	-	-	-	27.09	-	0.00%
395.0	Laboratory Equipment	394,394	1.00	-	-	-	10.99	-	0.00%
396.0	Power Operated Equipment	5,931	1.00	-	-	-	5.50	-	0.00%
397.0	Communication Equipment	4,666,769	1.00	-	-	-	10.13	-	0.00%
398.0	Miscellaneous Equipment	584,684	1.00	-	-	-	14.63	-	0.00%
	Total General Plant	28,675,764		385,920	-	385,920		29,460	0.10%
	Total Depreciable Plant	\$ 1,303,125,437		\$ 348,894,027	\$ 28,231,864	\$ 320,662,163		\$ 13,788,085	1.06%

Sources:

Cols. (3) & (8) from Exhibit JEH-1, Schedule 1.

Col. (4) for Production from ProductionAnalysis.xls (response to AG 1-105, SK split of gross salvage and COR). T, D & G from Exhibit JEH-1, Schedule III.

Col. (6) from page 4.

KENTUCKY POWER COMPANY  
 REMOVAL OF ACCRUED COST OF REMOVAL FROM BOOK RESERVE  
 BASED ON PLANT IN SERVICE AT DECEMBER 31, 2004

<u>ACCOUNT</u>		<u>ORIGINAL</u>	<u>ALLOCATED</u>	<u>ALLOCATED</u>	<u>BOOK</u>
<u>NO.</u>	<u>TITLE</u>	<u>COST AT</u>	<u>ACCUMULATED</u>	<u>COR IN</u>	<u>RESERVE</u>
<u>(1)</u>	<u>(2)</u>	<u>12/31/2004</u>	<u>DEPRECIATION</u>	<u>RESERVE</u>	<u>LESS COR</u>
		<u>(3)</u>	<u>(4)</u>	<u>(5)</u>	<u>(6)=(4)-(5)</u>
<u>STEAM PRODUCTION PLANT</u>					
BIG SANDY PLANT					
311.0	Structures & Improvements	\$ 36,149,758	\$ 17,003,960	\$ 2,861,644	\$ 14,142,316
312.0	Boiler Plant Equipment	324,538,695	105,248,658	17,712,590	87,536,069
314.0	Turbogenerator Units	73,038,983	35,257,246	5,933,540	29,323,706
315.0	Accessory Electrical Equipment	13,742,601	7,280,968	1,225,334	6,055,634
316.0	Misc. Power Plant Equip.	<u>6,518,954</u>	<u>2,963,620</u>	<u>498,756</u>	<u>2,464,864</u>
	Total Steam Production Plant	453,988,991	167,754,452	28,231,864	139,522,588
<u>TRANSMISSION PLANT</u>					
350.1	Land Rights	23,258,047	5,181,575	-	5,181,575
352.0	Structures & Improvements	6,387,065	1,734,110	-	1,734,110
353.0	Station Equipment	123,153,116	24,094,424	-	24,094,424
354.0	Towers & Fixtures	92,364,356	35,485,349	-	35,485,349
355.0	Poles & Fixtures	37,506,208	14,516,677	-	14,516,677
356.0	OH Conductor & Devices	100,355,481	31,808,967	-	31,808,967
356.0	Underground Conduit	11,590	4,557	-	4,557
358.0	Underground Conductor	<u>106,066</u>	<u>30,002</u>	<u>-</u>	<u>30,002</u>
	Total Transmission Plant	383,141,929	112,855,660	-	112,855,660
<u>DISTRIBUTION PLANT</u>					
360.1	Land Rights	3,691,802	1,521,740	-	1,521,740
361.0	Structures & Improvements	4,231,065	832,942	-	832,942
362.0	Station Equipment	42,017,840	12,354,632	-	12,354,632
364.0	Poles, Towers, & Fixtures	124,672,243	50,791,264	-	50,791,264
365.0	Overhead Conductor & Devices	99,426,561	20,684,820	-	20,684,820
366.0	Underground Conduit	2,959,899	502,532	-	502,532
367.0	Underground Conductor	5,482,068	627,688	-	627,688
368.0	Line Transformers	84,185,422	18,995,426	-	18,995,426
369.0	Services	31,239,944	7,199,752	-	7,199,752
370.0	Meters	21,071,793	8,066,030	-	8,066,030
371.0	Installations on Custs. Prem.	15,598,882	3,755,890	-	3,755,890
373.0	Street Lighting & Signal Sys.	<u>2,741,234</u>	<u>877,496</u>	<u>-</u>	<u>877,496</u>
	Total Distribution Plant	437,318,753	126,210,213	-	126,210,213
<u>GENERAL PLANT</u>					
389.2	Land Rights	84,011	5,029	-	5,029
390.0	Structures & Improvements	19,295,997	4,035,838	-	4,035,838
391.0	Office Furniture & Equipment	1,737,579	188,681	-	188,681
392.0	Transportation Equipment	5,819	1,531	-	1,531
393.0	Stores Equipment	189,262	22,965	-	22,965
394.0	Tools Shop & Garage Equipment	1,711,318	128,220	-	128,220
395.0	Laboratory Equipment	394,394	126,446	-	126,446
396.0	Power Operated Equipment	5,931	905	-	905
397.0	Communication Equipment	4,666,769	957,217	-	957,217
398.0	Miscellaneous Equipment	<u>584,684</u>	<u>65,719</u>	<u>-</u>	<u>65,719</u>
	Total General Plant	28,675,764	5,532,552	-	5,532,552
	Total Depreciable Plant	<u>\$ 1,303,125,437</u>	<u>\$ 412,352,877</u>	<u>\$ 28,231,864</u>	<u>\$ 384,121,013</u>

Sources:

Cols. (3) and (4) from Exhibit JEH-1, Schedule 1. Note that reserves were allocated based on theoretical reserve.  
 Col. (5) total COR in reserve from response to AG 1-166 and AG 2-49, allocated to production accounts based on allocated reserves.

**Exhibit\_\_\_(MJM-2)**

**Snavelly King Majoros O'Connor & Lee, Inc.**

**Recommended Depreciation Rates**

KENTUCKY POWER COMPANY  
SEPARATION OF SNAVELY KING RECOMMENDED RATES INTO CAPITAL RECOVERY AND COST OF REMOVAL  
BASED ON PLANT IN SERVICE AT DECEMBER 31, 2004

ACCOUNT		ORIGINAL COST AT 12/31/2004 (3)	CAPITAL RECOVERY		COST OF REMOVAL		COMBINED	
NO. (1)	TITLE (2)		ANNUAL ACCRUAL (4)	ACCRUAL RATE (5)=(4)*(3)	ANNUAL ACCRUAL (6)	ACCRUAL RATE (7)=(6)*(3)	ANNUAL ACCRUAL (8)=(4)+(6)	ACCRUAL RATE (9)=(5)+(7)
<b>STEAM PRODUCTION PLANT</b>								
BIG SANDY PLANT								
311.0	Structures & Improvements	\$ 36,149,758	\$ 738,255	2.04%	\$ 484	0.00%	\$ 738,739	2.04%
312.0	Boiler Plant Equipment	324,538,695	10,115,865	3.12%	1,067,863	0.33%	11,183,728	3.45%
314.0	Turbogenerator Units	73,038,983	1,760,941	2.41%	145,001	0.20%	1,905,942	2.61%
315.0	Accessory Electrical Equipment	13,742,601	261,543	1.90%	4,599	0.03%	266,142	1.94%
316.0	Misc. Power Plant Equip.	6,518,954	146,603	2.25%	5,831	0.09%	152,434	2.34%
	Total Steam Production Plant	453,988,991	13,023,206	2.87%	1,223,778	0.27%	14,246,985	3.14%
<b>TRANSMISSION PLANT</b>								
350.1	Land Rights	23,258,047	299,353	1.29%	-	0.00%	299,353	1.29%
352.0	Structures & Improvements	6,387,065	99,691	1.56%	1,870	0.03%	101,561	1.59%
353.0	Station Equipment	123,153,116	1,943,058	1.58%	151,688	0.12%	2,094,746	1.70%
354.0	Towers & Fixtures	92,364,356	1,596,031	1.73%	97,077	0.11%	1,693,108	1.83%
355.0	Poles & Fixtures	37,506,208	1,025,774	2.73%	84,138	0.22%	1,109,912	2.96%
356.0	OH Conductor & Devices	100,355,481	1,518,235	1.51%	85,763	0.09%	1,603,999	1.60%
356.0	Underground Conduit	11,590	286	2.47%	-	0.00%	286	2.47%
358.0	Underground Conductor	106,066	2,292	2.16%	-	0.00%	2,292	2.16%
	Total Transmission Plant	383,141,929	6,484,721	1.69%	420,537	0.11%	6,905,258	1.80%
<b>DISTRIBUTION PLANT</b>								
360.1	Land Rights	3,691,802	33,061	0.90%	-	0.00%	33,061	0.90%
361.0	Structures & Improvements	4,231,065	48,050	1.14%	1,679	0.04%	49,729	1.18%
362.0	Station Equipment	42,017,840	730,930	1.74%	153,899	0.37%	884,829	2.11%
364.0	Poles, Towers, & Fixtures	124,672,243	2,690,855	2.16%	904,829	0.73%	3,595,683	2.88%
365.0	Overhead Conductor & Devices	99,426,561	1,656,906	1.67%	199,029	0.20%	1,855,935	1.87%
366.0	Underground Conduit	2,959,899	53,424	1.80%	-	0.00%	53,424	1.80%
367.0	Underground Conductor	5,482,068	81,381	1.48%	-	0.00%	81,381	1.48%
368.0	Line Transformers	84,185,422	1,387,062	1.65%	137,986	0.16%	1,525,048	1.81%
369.0	Services	31,239,944	994,202	3.18%	-	0.00%	994,202	3.18%
370.0	Meters	21,071,793	382,210	1.81%	23,297	0.11%	405,507	1.92%
371.0	Installations on Custs. Prem.	15,598,882	772,913	4.95%	114,250	0.73%	887,163	5.69%
373.0	Street Lighting & Signal Sys.	2,741,234	97,763	3.57%	6,550	0.24%	104,313	3.81%
	Total Distribution Plant	437,318,753	8,928,757	2.04%	1,541,519	0.35%	10,470,275	2.39%
<b>GENERAL PLANT</b>								
389.2	Land Rights	84,011	1,199	1.43%	-	0.00%	1,199	1.43%
390.0	Structures & Improvements	19,295,997	990,016	5.13%	24,006	0.12%	1,014,022	5.26%
391.0	Office Furniture & Equipment	1,737,579	56,793	3.27%	-	0.00%	56,793	3.27%
392.0	Transportation Equipment	5,819	308	5.30%	-	0.00%	308	5.30%
393.0	Stores Equipment	189,262	7,360	3.89%	-	0.00%	7,360	3.89%
394.0	Tools Shop & Garage Equipment	1,711,318	58,361	3.41%	-	0.00%	58,361	3.41%
395.0	Laboratory Equipment	394,394	24,193	6.13%	-	0.00%	24,193	6.13%
396.0	Power Operated Equipment	5,931	911	15.36%	-	0.00%	911	15.36%
397.0	Communication Equipment	4,666,769	318,559	6.83%	-	0.00%	318,559	6.83%
398.0	Miscellaneous Equipment	584,684	35,403	6.06%	-	0.00%	35,403	6.06%
	Total General Plant	28,675,764	1,493,104	5.21%	24,006	0.08%	1,517,110	5.29%
	Total Depreciable Plant	\$ 1,303,125,437	\$ 29,929,786	2.30%	\$ 3,209,839	0.25%	\$ 33,139,627	2.54%

Sources:

- Col. (3) from Exhibit JEH-1, Schedule 1.
- Col. (4) from page 2.
- Col. (6) from page 3.

KENTUCKY POWER COMPANY  
CALCULATION OF SNAVELY KING RECOMMENDED CAPITAL RECOVERY RATE  
BASED ON PLANT IN SERVICE AT DECEMBER 31, 2004

ACCOUNT		ORIGINAL	BOOK	GROSS	FUTURE	AVERAGE LIFE	AVERAGE	CAPITAL RECOVERY	
NO.	TITLE	COST AT	RESERVE	SALVAGE	ACCURUALS	AND	REMAINING	ANNUAL	ACCRUAL
(1)	(2)	12/31/2004	LESS COR	RATIO	(6)=[(3)*(5)]-(4)	CURVE TYPE	LIFE	ACCURUAL	RATE
		(3)	(4)	(5)		(7)	(8)	(9)=(6)/(8)	(10)=(9)*(3)
<b>STEAM PRODUCTION PLANT</b>									
BIG SANDY PLANT									
311.0	Structures & Improvements	\$ 36,149,758	\$ 15,343,962	1.00	\$ 20,715,422	FCST.	28.06	\$ 738,255	2.04%
312.0	Boiler Plant Equipment	324,538,695	85,669,882	0.96	225,887,265	FCST.	22.33	10,115,865	3.12%
314.0	Turbogenerator Units	73,038,983	29,395,255	0.97	41,452,558	FCST.	23.54	1,760,941	2.41%
315.0	Accessory Electrical Equipment	13,742,601	6,509,523	0.99	7,095,652	FCST.	27.13	261,543	1.90%
316.0	Misc. Power Plant Equip.	6,518,954	2,603,967	0.99	3,849,798	FCST.	26.26	146,603	2.25%
	<b>Total Steam Production Plant</b>	<b>453,988,991</b>	<b>139,522,588</b>		<b>299,000,695</b>			<b>13,023,206</b>	<b>2.87%</b>
<b>TRANSMISSION PLANT</b>									
350.1	Land Rights	23,258,047	7,078,002	1.00	16,180,045	75 R4.0	54.05	299,353	1.29%
352.0	Structures & Improvements	6,387,065	2,131,580	0.90	3,616,778	55 S3.0	36.28	99,691	1.56%
353.0	Station Equipment	123,153,116	21,388,603	0.65	58,660,922	40 R1.5	30.19	1,943,058	1.58%
354.0	Towers & Fixtures	92,364,356	35,896,770	1.00	56,467,586	55 R4.0	35.38	1,596,031	1.73%
355.0	Poles & Fixtures	37,506,208	13,215,883	1.00	24,290,325	35 S6.0	23.68	1,025,774	2.73%
356.0	OH Conductor & Devices	100,355,481	33,097,627	0.80	47,186,757	50 S6.0	31.08	1,518,235	1.51%
356.0	Underground Conduit	11,590	6,225	1.00	5,365	37 R2.0	18.76	286	2.47%
358.0	Underground Conductor	106,066	40,970	1.00	65,096	44 R1.0	28.40	2,292	2.16%
	<b>Total Transmission Plant</b>	<b>383,141,929</b>	<b>112,855,660</b>		<b>206,472,876</b>			<b>6,484,721</b>	<b>1.69%</b>
<b>DISTRIBUTION PLANT</b>									
360.1	Land Rights	3,691,802	2,195,772	1.00	1,496,030	75 R4.0	45.25	33,061	0.90%
361.0	Structures & Improvements	4,231,065	1,081,585	0.90	2,726,373	70 L1.5	56.74	48,050	1.14%
362.0	Station Equipment	42,017,840	11,589,283	0.65	15,722,313	30 R0.5	21.51	730,930	1.74%
364.0	Poles, Towers, & Fixtures	124,672,243	39,256,550	0.75	54,247,632	28 R0.5	20.16	2,690,855	2.16%
365.0	Overhead Conductor & Devices	99,426,561	22,392,130	0.60	37,263,806	30 R0.5	22.49	1,656,906	1.67%
366.0	Underground Conduit	2,959,899	725,190	1.00	2,234,709	50 R1.0	41.83	53,424	1.80%
367.0	Underground Conductor	5,482,068	905,664	0.85	3,754,093	53 R0.5	46.13	81,381	1.48%
368.0	Line Transformers	84,185,422	21,937,771	0.60	28,573,482	29 R0.5	20.60	1,387,062	1.65%
369.0	Services	31,239,944	10,388,227	0.85	16,165,725	22 R0.5	16.26	994,202	3.18%
370.0	Meters	21,071,793	10,859,356	0.70	3,890,899	20 R3.0	10.18	382,210	1.81%
371.0	Installations on Custs. Prem.	15,598,882	3,792,959	0.70	7,126,259	12 L0.0	9.22	772,913	4.95%
373.0	Street Lighting & Signal Sys.	2,741,234	1,085,725	0.90	1,381,386	20 L0.0	14.13	97,763	3.57%
	<b>Total Distribution Plant</b>	<b>437,318,753</b>	<b>126,210,213</b>		<b>174,582,708</b>			<b>8,928,757</b>	<b>2.04%</b>
<b>GENERAL PLANT</b>									
389.2	Land Rights	84,011	5,114	1.00	78,897	75 R4.0	65.80	1,199	1.43%
390.0	Structures & Improvements	19,295,997	4,011,271	0.88	12,969,206	25 L2.0	13.10	990,016	5.13%
391.0	Office Furniture & Equipment	1,737,579	191,682	1.00	1,545,897	35 R0.5	27.22	56,793	3.27%
392.0	Transportation Equipment	5,819	1,557	1.00	4,262	30 R3.0	13.83	308	5.30%
393.0	Stores Equipment	189,262	23,356	1.00	165,906	30 L0.0	22.54	7,360	3.89%
394.0	Tools Shop & Garage Equipment	1,711,318	130,313	1.00	1,581,005	32 L0.0	27.09	58,361	3.41%
395.0	Laboratory Equipment	394,394	128,508	1.00	265,886	32 S5.0	10.99	24,193	6.13%
396.0	Power Operated Equipment	5,931	920	1.00	5,011	8 SQ	5.50	911	15.36%
397.0	Communication Equipment	4,666,769	973,092	0.90	3,227,000	19 S6.0	10.13	318,559	6.83%
398.0	Miscellaneous Equipment	584,684	66,738	1.00	517,946	19 L2.0	14.63	35,403	6.06%
	<b>Total General Plant</b>	<b>28,675,764</b>	<b>5,532,552</b>		<b>20,361,015</b>			<b>1,493,104</b>	<b>5.21%</b>
	<b>Total Depreciable Plant</b>	<b>\$ 1,303,125,437</b>	<b>\$ 384,121,013</b>		<b>\$ 700,417,294</b>			<b>\$ 29,929,786</b>	<b>2.30%</b>

Sources:

Cols. (3) & (7) from Exhibit JEH-1, Schedule 1.

Col. (4) from page 5.

Col. (5) for Production from Exhibit (MJM-5). T, D & G from Exhibit JEH-1, Schedule III.

KENTUCKY POWER COMPANY  
CALCULATION OF SNAVELY KING RECOMMENDED COST OF REMOVAL RATE  
USING 5-YEAR AVERAGE ALLOWANCE APPROACH  
BASED ON PLANT IN SERVICE AT DECEMBER 31, 2004

ACCOUNT		ORIGINAL	HENDERSON	SNAVELY KING	SNAVELY KING
NO.	TITLE	COST AT	COR	ALLOCATED	COR
(1)	(2)	12/31/2004	ANNUAL	ANNUAL	ANNUAL
		(3)	ACCRUAL	ACCRUAL	RATE
			(4)	(5)	(6)=(5)/(3)
<b>STEAM PRODUCTION PLANT</b>					
BIG SANDY PLANT					
311.0	Structures & Improvements	\$ 36,149,758	\$ 1,168	\$ 484	0.00%
312.0	Boiler Plant Equipment	324,538,695	2,576,077	1,067,863	0.33%
314.0	Turbogenerator Units	73,038,983	349,796	145,001	0.20%
315.0	Accessory Electrical Equipment	13,742,601	11,095	4,599	0.03%
316.0	Misc. Power Plant Equip.	6,518,954	14,066	5,831	0.09%
	Total Steam Production Plant	453,988,991	2,952,202	1,223,778	0.27%
<b>TRANSMISSION PLANT</b>					
350.1	Land Rights	23,258,047	-	-	0.00%
352.0	Structures & Improvements	6,387,065	17,605	1,870	0.03%
353.0	Station Equipment	123,153,116	1,427,744	151,688	0.12%
354.0	Towers & Fixtures	92,364,356	913,723	97,077	0.11%
355.0	Poles & Fixtures	37,506,208	791,939	84,138	0.22%
356.0	OH Conductor & Devices	100,355,481	807,235	85,763	0.09%
356.0	Underground Conduit	11,590	-	-	0.00%
358.0	Underground Conductor	106,066	-	-	0.00%
	Total Transmission Plant	383,141,929	3,958,246	420,537	0.11%
<b>DISTRIBUTION PLANT</b>					
360.1	Land Rights	3,691,802	-	-	0.00%
361.0	Structures & Improvements	4,231,065	7,457	1,679	0.04%
362.0	Station Equipment	42,017,840	683,693	153,899	0.37%
364.0	Poles, Towers, & Fixtures	124,672,243	4,019,690	904,829	0.73%
365.0	Overhead Conductor & Devices	99,426,561	884,185	199,029	0.20%
366.0	Underground Conduit	2,959,899	-	-	0.00%
367.0	Underground Conductor	5,482,068	-	-	0.00%
368.0	Line Transformers	84,185,422	613,001	137,986	0.16%
369.0	Services	31,239,944	-	-	0.00%
370.0	Meters	21,071,793	103,496	23,297	0.11%
371.0	Installations on Custs. Prem.	15,598,882	507,556	114,250	0.73%
373.0	Street Lighting & Signal Sys.	2,741,234	29,100	6,550	0.24%
	Total Distribution Plant	437,318,753	6,848,178	1,541,519	0.35%
<b>GENERAL PLANT</b>					
389.2	Land Rights	84,011	-	-	0.00%
390.0	Structures & Improvements	19,295,997	29,460	24,006	0.12%
391.0	Office Furniture & Equipment	1,737,579	-	-	0.00%
392.0	Transportation Equipment	5,819	-	-	0.00%
393.0	Stores Equipment	189,262	-	-	0.00%
394.0	Tools Shop & Garage Equipment	1,711,318	-	-	0.00%
395.0	Laboratory Equipment	394,394	-	-	0.00%
396.0	Power Operated Equipment	5,931	-	-	0.00%
397.0	Communication Equipment	4,666,769	-	-	0.00%
398.0	Miscellaneous Equipment	584,684	-	-	0.00%
	Total General Plant	28,675,764	29,460	24,006	0.08%
	Total Depreciable Plant	\$ 1,303,125,437	\$ 13,788,085	\$ 3,209,840	0.25%

Sources:

Col. (3) from Exhibit JEH-1, Schedule 1.

Col. (4) from Exhibit (MJM-1).

Col. (5) by function from Exhibit (MJM-5), allocated to account based on Col. (4).

KENTUCKY POWER COMPANY  
THEORETICAL RESERVE AND ALLOCATION OF BOOK RESERVE  
BASED ON PLANT IN SERVICE AT DECEMBER 31, 2004  
AND SNAVELY KING RECOMMENDED PARAMETERS

ACCOUNT		ORIGINAL	AVG. LIFE	GROSS	AVERAGE	CALCULATED	ALLOCATED
NO.	TITLE	COST AT	AND	SALVAGE	REMAINING	DEPRECIATION	ACCUMULATED
(1)	(2)	12/31/2004	CURVE TYPE	RATIO	LIFE	REQUIREMENT	DEPRECIATION
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>STEAM PRODUCTION PLANT</b>							
BIG SANDY PLANT							
311.0	Structures & Improvements	\$ 36,149,758	54.14 FCST	1.00	28.06	\$ 17,370,313	\$ 18,448,754
312.0	Boiler Plant Equipment	324,538,695	32.30 FCST	0.96	22.33	96,167,949	103,004,856
314.0	Turbogenerator Units	73,038,983	44.39 FCST	0.97	23.54	33,277,245	35,343,273
315.0	Accessory Electrical Equipment	13,742,601	59.19 FCST	0.99	27.13	7,369,182	7,826,700
316.0	Misc. Power Plant Equip.	6,518,954	48.34 FCST	0.99	26.26	2,947,851	3,130,869
	Total Steam Production Plant	453,988,991				157,132,540	167,754,452
<b>TRANSMISSION PLANT</b>							
350.1	Land Rights	23,258,047	75 R4.0	1.00	54.05	6,496,748	7,078,002
352.0	Structures & Improvements	6,387,065	55 S3.0	0.90	36.28	1,956,532	2,131,580
353.0	Station Equipment	123,153,116	40 R1.5	0.65	30.19	19,632,146	21,388,603
354.0	Towers & Fixtures	92,364,356	55 R4.0	1.00	35.38	32,948,885	35,896,770
355.0	Poles & Fixtures	37,506,208	35 S6.0	1.00	23.68	12,130,579	13,215,883
356.0	OH Conductor & Devices	100,355,481	50 S6.0	0.80	31.08	30,379,611	33,097,627
356.0	Underground Conduit	11,590	37 R2.0	1.00	18.76	5,714	6,225
358.0	Underground Conductor	106,066	44 R1.0	1.00	28.40	37,605	40,970
	Total Transmission Plant	383,141,929				103,587,820	112,855,660
<b>DISTRIBUTION PLANT</b>							
360.1	Land Rights	3,691,802	75 R4.0	1.00	45.25	1,464,415	2,195,772
361.0	Structures & Improvements	4,231,065	70 L1.5	0.90	56.74	721,336	1,081,585
362.0	Station Equipment	42,017,840	30 R0.5	0.65	21.51	7,729,182	11,589,283
364.0	Poles, Towers, & Fixtures	124,672,243	28 R0.5	0.75	20.16	26,181,171	39,256,550
365.0	Overhead Conductor & Devices	99,426,561	30 R0.5	0.60	22.49	14,933,869	22,392,130
366.0	Underground Conduit	2,959,899	50 R1.0	1.00	41.83	483,647	725,190
367.0	Underground Conductor	5,482,068	53 R0.5	0.85	46.13	604,010	905,664
368.0	Line Transformers	84,185,422	29 R0.5	0.60	20.60	14,630,846	21,937,771
369.0	Services	31,239,944	22 R0.5	0.85	16.26	6,928,168	10,388,227
370.0	Meters	21,071,793	20 R3.0	0.70	10.18	7,242,375	10,859,356
371.0	Installations on Custs. Prem.	15,598,882	12 L0.0	0.70	9.22	2,529,619	3,792,959
373.0	Street Lighting & Signal Sys.	2,741,234	20 L0.0	0.90	14.13	724,097	1,085,725
	Total Distribution Plant	437,318,753				84,172,735	126,210,213
<b>GENERAL PLANT</b>							
389.2	Land Rights	84,011	75 R4.0	1.00	65.80	10,305	5,114
390.0	Structures & Improvements	19,295,997	25 L2.0	0.88	13.10	8,082,707	4,011,271
391.0	Office Furniture & Equipment	1,737,579	35 R0.5	1.00	27.22	386,239	191,682
392.0	Transportation Equipment	5,819	30 R3.0	1.00	13.83	3,136	1,557
393.0	Stores Equipment	189,262	30 L0.0	1.00	22.54	47,063	23,356
394.0	Tools Shop & Garage Equipment	1,711,318	32 L0.0	1.00	27.09	262,580	130,313
395.0	Laboratory Equipment	394,394	32 S5.0	1.00	10.99	258,944	128,508
396.0	Power Operated Equipment	5,931	8 SQ	1.00	5.50	1,853	920
397.0	Communication Equipment	4,666,769	19 S6.0	0.90	10.13	1,960,780	973,092
398.0	Miscellaneous Equipment	584,684	19 L2.0	1.00	14.63	134,477	66,738
	Total General Plant	28,675,764				11,148,086	5,532,552
	Total Depreciable Plant	\$ 1,303,125,437				\$ 356,041,182	\$ 412,352,877

(a) Per Company calculation, includes \$866,291 of accumulated amortization applicable to SCR Catalysts.

**Sources:**

- Col. (3) from Exhibit JEH-1, Schedule 1.
- Cols. (4) and (6) for Production from Exhibit (MJM-4). T, D & G from Exhibit JEH-1, Schedule 1.
- Col. (5) for Production from Exhibit (MJM-5). T, D & G from Exhibit JEH-1, Schedule III.
- Col. (7) calculated using standard theoretical reserve formula.
- Col. (8) allocated based on col. (7) as per Company formula.

KENTUCKY POWER COMPANY  
 REMOVAL OF ACCRUED COST OF REMOVAL FROM BOOK RESERVE  
 BASED ON PLANT IN SERVICE AT DECEMBER 31, 2004  
 AND SNAVELY KING ALLOCATED RESERVE

<u>ACCOUNT</u>		<u>ORIGINAL</u>	<u>ALLOCATED</u>	<u>ALLOCATED</u>	<u>BOOK</u>
<u>NO.</u>	<u>TITLE</u>	<u>COST AT</u>	<u>ACCUMULATED</u>	<u>COR IN</u>	<u>RESERVE</u>
<u>(1)</u>	<u>(2)</u>	<u>12/31/2004</u>	<u>DEPRECIATION</u>	<u>RESERVE</u>	<u>LESS COR</u>
		<u>(3)</u>	<u>(4)</u>	<u>(5)</u>	<u>(6)=(4)-(5)</u>
<u>STEAM PRODUCTION PLANT</u>					
BIG SANDY PLANT					
311.0	Structures & Improvements	\$ 36,149,758	\$ 18,448,754	\$ 3,104,792	\$ 15,343,962
312.0	Boiler Plant Equipment	324,538,695	103,004,856	17,334,974	85,669,882
314.0	Turbogenerator Units	73,038,983	35,343,273	5,948,018	29,395,255
315.0	Accessory Electrical Equipment	13,742,601	7,826,700	1,317,177	6,509,523
316.0	Misc. Power Plant Equip.	6,518,954	3,130,869	526,903	2,603,967
	Total Steam Production Plant	453,988,991	167,754,452	28,231,864	139,522,588
<u>TRANSMISSION PLANT</u>					
350.1	Land Rights	23,258,047	7,078,002	-	7,078,002
352.0	Structures & Improvements	6,387,065	2,131,580	-	2,131,580
353.0	Station Equipment	123,153,116	21,388,603	-	21,388,603
354.0	Towers & Fixtures	92,364,356	35,896,770	-	35,896,770
355.0	Poles & Fixtures	37,506,208	13,215,883	-	13,215,883
356.0	OH Conductor & Devices	100,355,481	33,097,627	-	33,097,627
356.0	Underground Conduit	11,590	6,225	-	6,225
358.0	Underground Conductor	106,066	40,970	-	40,970
	Total Transmission Plant	383,141,929	112,855,660	-	112,855,660
<u>DISTRIBUTION PLANT</u>					
360.1	Land Rights	3,691,802	2,195,772	-	2,195,772
361.0	Structures & Improvements	4,231,065	1,081,585	-	1,081,585
362.0	Station Equipment	42,017,840	11,589,283	-	11,589,283
364.0	Poles, Towers, & Fixtures	124,672,243	39,256,550	-	39,256,550
365.0	Overhead Conductor & Devices	99,426,561	22,392,130	-	22,392,130
366.0	Underground Conduit	2,959,899	725,190	-	725,190
367.0	Underground Conductor	5,482,068	905,664	-	905,664
368.0	Line Transformers	84,185,422	21,937,771	-	21,937,771
369.0	Services	31,239,944	10,388,227	-	10,388,227
370.0	Meters	21,071,793	10,859,356	-	10,859,356
371.0	Installations on Custs. Prem.	15,598,882	3,792,959	-	3,792,959
373.0	Street Lighting & Signal Sys.	2,741,234	1,085,725	-	1,085,725
	Total Distribution Plant	437,318,753	126,210,213	-	126,210,213
<u>GENERAL PLANT</u>					
389.2	Land Rights	84,011	5,114	-	5,114
390.0	Structures & Improvements	19,295,997	4,011,271	-	4,011,271
391.0	Office Furniture & Equipment	1,737,579	191,682	-	191,682
392.0	Transportation Equipment	5,819	1,557	-	1,557
393.0	Stores Equipment	189,262	23,356	-	23,356
394.0	Tools Shop & Garage Equipment	1,711,318	130,313	-	130,313
395.0	Laboratory Equipment	394,394	128,508	-	128,508
396.0	Power Operated Equipment	5,931	920	-	920
397.0	Communication Equipment	4,666,769	973,092	-	973,092
398.0	Miscellaneous Equipment	584,684	66,738	-	66,738
	Total General Plant	28,675,764	5,532,552	-	5,532,552
	Total Depreciable Plant	\$ 1,303,125,437	\$ 412,352,877	\$ 28,231,864	\$ 384,121,013

Sources:

Col. (3) from Exhibit JEH-1, Schedule 1.

Col. (4) from page 4. Book reserve allocated based on SK theoretical reserve.

Col. (5) total COR in reserve from response to AG 1-166 and AG 2-49, allocated to production accounts based on allocated reserves.

**Exhibit\_\_\_(MJM-3)**

**Snavely King Majoros O'Connor & Lee, Inc.**

**National Study  
Steam Generating Unit Lives**

**Snavely King Majoros O'Connor & Lee, Inc.**  
**National Study of U.S. Steam Generating Unit Lives**  
**50 MW and Greater**  
**(Update)**

Snavely King Majoros O'Connor & Lee, Inc. ("Snavely King") performed a study of U.S. Steam Generating Units Lives, 50 MW and Greater using analytical techniques generally accepted in the utility industry and a database maintained by the U.S. Department of Energy ("DOE"). Snavely King concludes that the lives of the U.S. Steam Generating Units (50 MW and Greater) are experiencing average life spans of approximately 60 years and these spans are lengthening almost on a year-to-year basis.

### **Database**

The DOE's Energy Information Administration ("EIA") requires every owner of an electric utility generating plant to file a Form 860 describing the status of its generating facilities. From these reports, EIA maintains data on the installation and retirements of generating units around the country.

The data utilized in this study is available on the EIA's web site. The primary data used in Snavely King's study is located in the Form 860-A database files. The Form 860-B data is also used to check the current status of units that have been sold to Non-Utility Generators ("NUG's"). The data was downloaded in several steps into a single Microsoft Access file and developed into inputs for Snavely King's actuarial analysis program.

Various sorts were made to refine the data and to remove bad data. For instance, some units listed as retired had no retirement dates indicated, etc.

### **Analysis**

Snavely King initially conducted a full band (1918-1999) resulting in a 54 L4 life and Iowa curve indication. Snavely King's initial ten-year band resulted in a 59 L4 indication and its initial rolling and shrinking band analysis showed trends toward longer lives – as long as 70 years.

Snavely King's update consisted of an analysis of the full band (1900-2000) and the most recent ten-year band (1991-2000) of data. The full band analysis had a best fit result of 60.5 L3, which indicates a 60 year life. The ten-year band best fit was a 59.5 R4, which indicates a 59 year life. Additional analyses were performed: an expanded full band analysis, rolling band analysis and a shrinking band analysis. The results are discussed and set forth in tabular form below.

**Expanded Full Band Analysis**

The expanded full band analysis held the initial year constant but used cut-off dates of 1999, 1998, 1997 and 1996. The actuarial analyses yielded the following results.

Expanded Full Band Analysis		
Band	Life	Curve Type
1900-00	60.5	L3
1900-99	58.5	L3
1900-98	58	L3
1900-97	57	L3
1900-96	56	L3

The results indicate that large generating units are being kept operational longer.

**Rolling Band Analysis**

The ten-year band analyses for these data sets provided a “rolling band” analysis. The results are summarized in the table below.

Band	Life	Curve Type
1991-2000	59.5	R4
1990-1999	56	R4
1989-1998	57.5	L4
1988-1997	54	S4
1987-1996	54.5	L4

This indicates an increase in lives of generating units probably coincident with the wide spread introduction of life extension programs and the reduction in investment by utilities in new base load generating units.

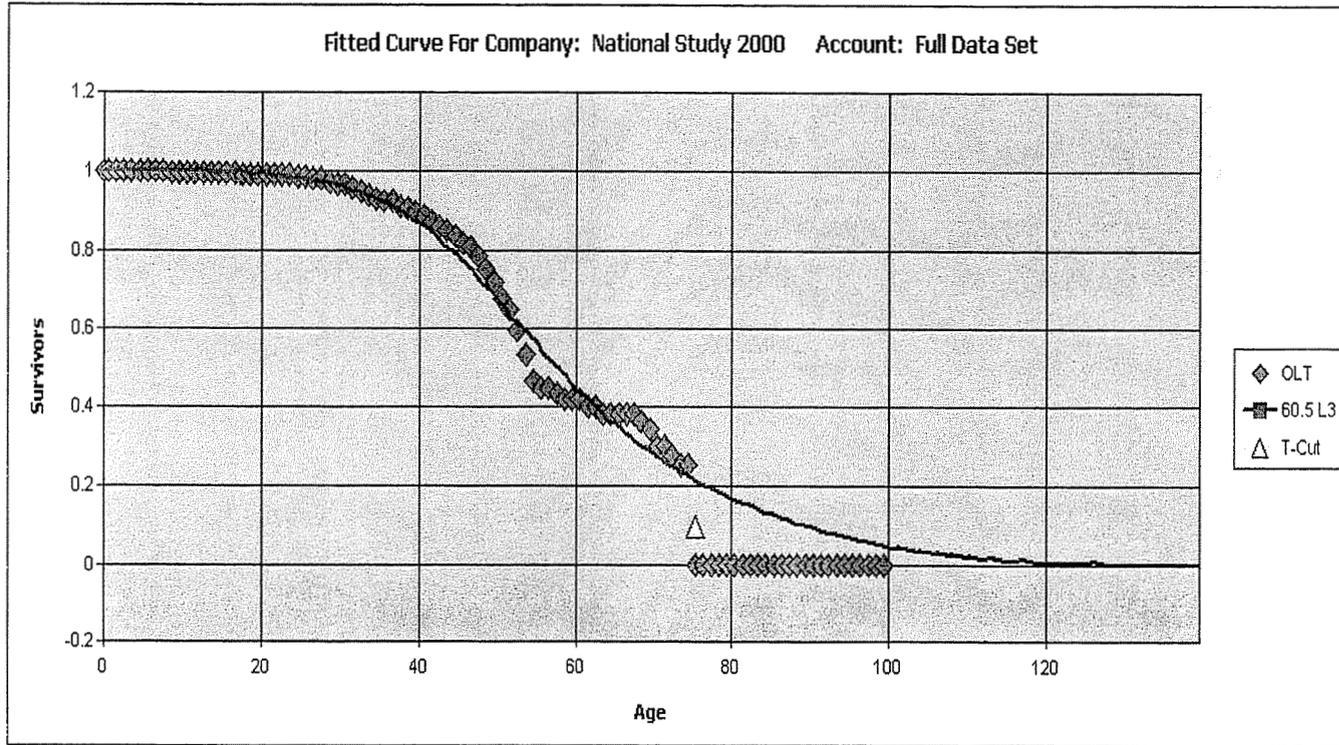
### Shrinking Band Analysis

Finally, Snavely King did a “shrinking band” analysis, in which the final 2000 year was held constant and the bands were continually shrunk.

Band	Width	Life	Curve Type
1996-99	5 years	77.5	R2
1995-00	6 years	74.5	R2.5
1994-00	7 years	66.5	R3
1993-00	8 years	69.5	L3
1992-00	9 years	67.5	L3
1991-00	10 years	59.5	R4
1986-00	15 years	58	R4
1981-00	20 years	56	L4
1976-00	25 years	55	L4

The shrinking band analysis corroborated earlier results and conclusions. The average life span of steam units 50 MW and Greater is currently in the 60-year range and is getting longer.

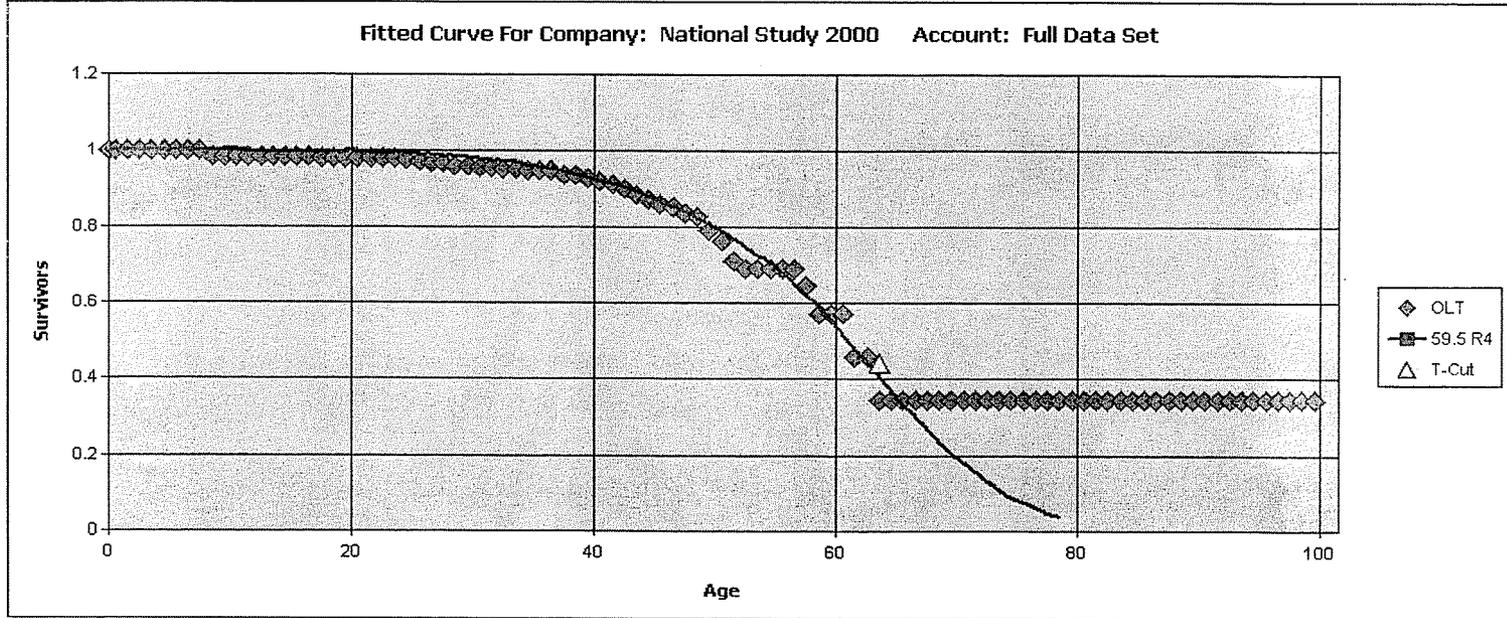
Best Fit Curve for 1900-2000



**Analytical Parameters**

OLT Placement Band: 1900 -2000  
 OLT Experience Band: 1900 - 2000  
 Minimum Life Parameter: 10  
 Maximum Life Parameter: 150  
 Life Increment Parameter: 0.5  
 Maximum Observations (T-Cut): 77 (75.5)

Best Fit Curve Results for 1991-2000



**Analytical Parameters**

OLT Placement Band:	1900 -2000
OLT Experience Band:	1991 - 2000
Minimum Life Parameter:	10
Maximum Life Parameter:	150
Life Increment Parameter:	0.5
Maximum Observations (T-Cut):	65 (63.5)

**Exhibit\_\_\_\_(MJM-4)**

**Snavely King Majoros O'Connor & Lee, Inc.**

**Depreciation Study**

**Lives**

Note: Due to its volume, only selected pages of the Study are included here. The entire study will be provided as workpapers.

# **Kentucky Power Company**

## **Snavelly King Life Study**

### **Production, Transmission, Distribution, and General Plant**

# Kentucky Power Company

## Snavey King Life Study

### Production, Transmission, Distribution, and General Plant

#### Description of Analysis Method

The SK actuarial model relies on the vintage date, activity date and the dollar value of plant transactions (i.e., additions, retirements, transfers, sales, and adjustments, etc.). The SPR model relies on the annual addition and retirement activity of the plant transactions. The information is determined from the data submitted in the Kentucky Power Company 12/31/2004 Depreciation Study and from its supporting documents.

#### Actuarial Analysis Program

The retirement rate method of actuarial analysis is a means to evaluate past experience for the purpose of determining life indications. It relies upon a compilation of plant mortality data arranged so that the plant dollars (or units) and retired dollars (or units) can be identified by ages. The plant dollars exposed at the start of each age year are termed exposures, the plant dollars at the end of that age year are the survivors, and the difference between the two is the plant dollars retired, or the retirements. These data are used to construct an observed life table (OLT) which is smoothed and extended by comparison to Iowa curves.

Iowa curves are standard curves empirically developed to describe the life characteristics of most industrial and utility property. They are used throughout the utility industry as well as other applications where life characteristics are sought.

There are 31 Iowa curves classified into L, R, S or O families, depending upon whether the highest point (mode) of the retirement frequency was left of, right of, or symmetrical to the curves average life. The mode of the O curves is at the origins. These curves are combined with varying average life assumptions and statistically compared to the OLT to obtain a "best fit" life for each curve, and then these results are ranked to obtain the best of the best fits.

Chapter VIII of the 1996 edition of the NARUC Public Utility Depreciation Practices manual provides an example of a retirement rate actuarial analysis stating with raw data and continuing through the best fit curve result. The NARUC example used aged mortality data as described above. Snavey King's retirement rate actuarial program was tailored upon the NARUC example. Snavey King's approach and program replicates the model contained in NARUC's 1996 Public Utility Depreciation Practices manual.

The actuarial program requires the analyst to determine the average service life upper and lower limits for the accounts being studied. Industry statistics were taken from the source: AGA/EEI "A Survey of Depreciation Statistics," 1998-1999

#### Simulated Plant Record Analysis

The Simulated Plant Record (SPR) model requires determining the surviving balances for each vintage of plant equipment. This data was retrieved from studies and data submitted by the Company.

The SPR data was calculated by determining the plant balance, or survivors, from vintage additions and non-vintage retirements. This plant balance was used with each Iowa curve to simulate retirements and corresponding aged balances. The properties of the simulated balances for each curve were ranked according to their ability to simulate the survivors for the account over the period selected. The algorithm for this method is as follows:

The annual additions and retirements determine the plant balances that are compared against the theoretical balances calculated from the 31 Iowa curves. Each curve is rated and ranked according to how close it matches the actual plant balance. The lower the conformance index, the better the match between the theoretical and actual balance.

The SPR programs requires the analyst to determine the average service life upper and lower limits for the accounts being studied.

Industry statistics were taken from the source: AGA/EEI "A Survey of Depreciation Statistics," 1998-1999

### Results

The actuarial model results provide a historical plant service life and curve that most closely represents the average of plant survivors for each account. The first step of the model provides the Observed Life Table or OLT. This shows exposures, retirements, retirement ratio, survival ratio and cumulative survivors. This OLT is a summary of historical plant mortality that shows experience bands of the plant data considered in the study. The cumulative survivor data may be truncated for aged data when the aged data shows discontinuity of small values as compared to the more recent plant activity. These cumulative survivors are fitted against the 31 Iowa curves to determine the best curve and life of the plant data. The curve results, cumulative survivors, Company proposed and Company Current are plotted to provide a visual reference of the fitted curves.

The results of the SPR provide a statistical matching of actual plant balances to the balances of the best fitted life and curves. The life and curves are ranked from best to worse.

All results are analyzed and compared with the results submitted by Kentucky Power Company . If the result of Kentucky Power Company is in question (due to various factors including data responses, company study, actuarial data, industry statistics and related information), then Generation Arrangement calculations are performed to determine the average remaining life. The remaining life calculation for Kentucky Power Company uses the BG/VG (broad group/vintage group) methodology.

The average remaining life is then used as a factor in calculating the depreciation rate for the account.

**Kentucky Power Company**  
**SK Analysis of Proposed Lives and Survivor Curves**  
**Production, Transmission, Distribution, and General Plant Summary 4/**

ACCOUNT		ORIGINAL	Company		Company		SK Modeling		SK Selection		ARL	Notes	
NO.	TITLE	COST AT 12/31/04	Current	Proposed	Proposed	Data	Best Fit	Life	Curve	Life	Curve		
			Life	Curve	Life	Curve	Life	Curve	Life	Curve			
			2/		3/		4/		5/		6/		
<b>STEAM PRODUCTION PLANT</b>													
BIG SANDY PLANT													
311.0	Structures & Improvements	36,149,758	FCST.		FCST.		100 - R2.5						
312.0	Boiler Plant Equipment	324,538,695	FCST.		FCST.		32 - R2.5						
314.0	Turbogenerator Units	73,038,983	FCST.		FCST.		39 - L2						
315.0	Accessory Electrical Equipment	13,742,601	FCST.		FCST.		67 - L2						
316.0	Misc. Power Plant Equip.	6,518,954	FCST.		FCST.		66 - L1						
	Total Steam Production Plant	<u>453,988,991</u>											
<b>TRANSMISSION PLANT</b>													
350.1	Land Rights	23,258,047	75 - R4.0		75 - R4.0		NA		75 - R4.0				
352.0	Structures & Improvements	6,387,065	55 - S1.5		55 - S3.0		55 - L4		55 - S3.0				
353.0	Station Equipment	123,153,116	50 - R0.5		40 - R1.5		41 - R2		40 - R1.5				
354.0	Towers & Fixtures	92,364,356	55 - R4.0		55 - R4.0		52 - R5		55 - R4.0				
355.0	Poles & Fixtures	37,506,208	45 - R3.0		35 - S6.0		39 - R3	*	39 - R3	28.0		accept due to lack of other disagreements	
356.0	OH Conductor & Devices	100,355,481	50 - R3.0		50 - S6.0		51 - S6		50 - S6.0				
357.0	Underground Conduit	11,590	37 - R2.0		37 - R2.0		NA		37 - R2.0			lack of data	
358.0	Underground Conductor	<u>106,066</u>	44 - R1.0		44 - R1.0		NA		44 - R1.0			lack of data	
	Total Transmission Plant	<u>383,141,929</u>											
<b>DISTRIBUTION PLANT</b>													
360.1	Land Rights	3,691,802	75 - R4.0		75 - R4.0		NA		75 - R4.0			lack of data	
361.0	Structures & Improvements	4,231,065	65 - LO.5		70 - L1.5		67 - S0.5		70 - L1.5				
362.0	Station Equipment	42,017,840	25 - LO.0		30 - R0.5		30 - R1		30 - R0.5				
364.0	Poles, Towers, & Fixtures	124,672,243	28 - LO.0		28 - R0.5		45 - O3		28 - R0.5				
365.0	Overhead Conductor & Devices	99,426,561	26 - R1.5		30 - R0.5		48 - O3		30 - R0.5				
366.0	Underground Conduit	2,959,899	37 - R2.0		50 - R1.0		96 - R1	*	74 - R1.5	64.5		Company moving from 37 to 50 ASL	
367.0	Underground Conductor	5,482,068	44 - R1.0		53 - R0.5		64 - O1		53 - R0.5				
368.0	Line Transformers	84,185,422	25 - R1.5		29 - R0.5		47 - O3		29 - R0.5				
369.0	Services	31,239,944	18 - R2.0		22 - R0.5		43 - O4		22 - R0.5				

**Kentucky Power Company  
SK Analysis of Proposed Lives and Survivor Curves  
Production, Transmission, Distribution, and General Plant Summary 4/**

ACCOUNT		ORIGINAL COST AT 12/31/04	Company Current		Company Proposed		SK Modeling Data Best Fit		SK Selection		ARL	Notes
NO.	TITLE		Life	Curve	Life	Curve	Life	Curve	Life	Curve		
370.0	Meters	21,071,793	27 - R0.5	20 - R3.0	22 - L1.5	20 - R3.0	20 - R3.0	20 - R3.0	20 - R3.0	6/		
371.0	Installations on Custs. Prem.	15,598,882	11 - LO.0	12 - L0.0	22 - O4	12 - L0.0	12 - L0.0	12 - L0.0	12 - L0.0			
373.0	Street Lighting & Signal Sys.	<u>2,741,234</u>	15 - LO.0	20 - L0.0	35 - O4	20 - L0.0	20 - L0.0	20 - L0.0	20 - L0.0			
	Total Distribution Plant	<u>437,318,753</u>										
GENERAL PLANT												
389.2	Land Rights	84,011	75 - R4.0	75 - R4.0	NA	75 - R4.0	75 - R4.0	75 - R4.0	75 - R4.0		lack of data	
390.0	Structures & Improvements	19,295,997	45 - L3.0	25 - L2.0	22 - R3	25 - L2.0	25 - L2.0	25 - L2.0	25 - L2.0			
391.0	Office Furniture & Equipment	1,737,579	35 - R0.5	35 - R0.5	41 - O2	35 - R0.5	35 - R0.5	35 - R0.5	35 - R0.5			
392.0	Transportation Equipment	5,819	30 - R3.0	30 - R3.0	17 - SQ	30 - R3.0	30 - R3.0	30 - R3.0	30 - R3.0		- only a 2001 investment left in account	
393.0	Stores Equipment	189,262	30 - R1.0	30 - L0.0	29 - L0	30 - L0.0	30 - L0.0	30 - L0.0	30 - L0.0			
394.0	Tools Shop & Garage Equipment	1,711,318	30 - R0.5	32 - L0.0	39 - O2	32 - L0.0	32 - L0.0	32 - L0.0	32 - L0.0			
395.0	Laboratory Equipment	394,394	30 - L5.0	32 - S5.0	36 - R3	32 - S5.0	32 - S5.0	32 - S5.0	32 - S5.0			
396.0	Power Operated Equipment	5,931	-	8 - 8 SQ	NA	8 - 8 SQ	8 - 8 SQ	8 - 8 SQ	8 - 8 SQ		lack of data	
397.0	Communication Equipment	4,666,769	22 - L3.0	19 - S6.0	20 - R4	19 - S6.0	19 - S6.0	19 - S6.0	19 - S6.0			
398.0	Miscellaneous Equipment	<u>584,684</u>	20 - S5.0	19 - L2.0	16 - L2	19 - L2.0	19 - L2.0	19 - L2.0	19 - L2.0			
	Total General Plant	<u>28,675,764</u>										
	Total Depreciable Plant	<u>1,303,125,437</u>										

- 1/ Excel file --> Other Depreciation Schedules/Schedule1 KPNewRates.xls
- 2/ Excel file --> Other Depreciation Schedules/Schedule III KPMortality Compare.xls
- 3/ Excel file --> Other Depreciation Schedules/Schedule1 KPNewRates.xls
- 4/ SK Statistical Modeling - Company Data from 2004 Company Depreciation Study [Account].dat files
- 5/ SK Analysis - Based on observations of Company depreciation data, Company depreciation study(ies), Company responses to questions, and Snavelly King analyses
- 6/ Broad Group/Vintage Group (BG/VG) calculations based on SK selection.

\* Snavelly King Analysis shows a different Life and Curve then the Company Proposal. Snavelly King's selection in its testimony may be different then this analysis based on other factors that may not be included in this life analysis.

KENTUCKY POWER COMPANY  
CALCULATED AVERAGE LIFE  
STEAM PRODUCTION PLANT - SNAVELY KING RECOMMENDATIONS

<u>ACCOUNT</u> (1)	PLANT BALANCE <u>AT 12-31-04</u> (2)	AVERAGE <u>AGE</u> (3)	AVERAGE <u>REM. LIFE</u> (4)	AVERAGE <u>LIFE</u> (5)=(3)+(4)
BIG SANDY				
311	36,149,758	26.08	28.06	54.14
312	324,538,694	9.97	22.33	32.30
314	73,038,983	20.85	23.54	44.39
315	13,742,601	32.06	27.13	59.19
316	<u>6,518,954</u>	22.08	26.26	48.34
Total	<u>453,988,990</u>			

## Sources:

Cols. (2) and (3) from "Big Sandy Theo Res.xls", provided in response to AG-1-105.  
Col. (4) from Exhibit\_\_\_\_(MJM-4).

KENTUCKY POWER COMPANY  
DEPRECIATION STUDY AS OF DECEMBER 31, 2004  
CALCULATION OF AVERAGE REMAINING LIFE  
BIG SANDY PLANT, ACCOUNT 311  
RETIREMENT YEARS - UNIT 1 2028; UNIT 2 2034

ANNUAL INTERIM RETIREMENT RATE 0.0011

<u>YEAR</u>	<u>AMOUNT RETIRED</u>	<u>REM. LIFE (YEARS)</u>	<u>DOLLAR YEARS</u>	<u>AVERAGE REM. LIFE</u>
2005	39,765	0.5	19,882	
2006	39,765	1.5	59,647	
2007	39,765	2.5	99,412	
2008	39,765	3.5	139,177	
2009	39,765	4.5	178,941	
2010	39,765	5.5	218,706	
2011	39,765	6.5	258,471	
2012	39,765	7.5	298,236	
2013	39,765	8.5	338,000	
2014	39,765	9.5	377,765	
2015	39,765	10.5	417,530	
2016	39,765	11.5	457,294	
2017	39,765	12.5	497,059	
2018	39,765	13.5	536,824	
2019	39,765	14.5	576,589	
2020	39,765	15.5	616,353	
2021	39,765	16.5	656,118	
2022	39,765	17.5	695,883	
2023	39,765	18.5	735,648	
2024	39,765	19.5	775,412	
2025	39,765	20.5	815,177	
2026	39,765	21.5	854,942	
2027	39,765	22.5	894,707	
2028	5,875,352	23.5	138,070,766	
2029	33,346	24.5	816,967	
2030	33,346	25.5	850,312	
2031	33,346	26.5	883,658	
2032	33,346	27.5	917,004	
2033	33,346	28.5	950,349	
2034	29,193,089	29.5	861,196,139	
<b>TOTALS</b>	<b>36,149,758</b>		<b>1,014,202,967</b>	<b>28.06</b>

INTERIM RETIREMENTS:

Total Plant at 12/31/04	36,149,758
Less Retirement of Unit 1 in 2028	-5,835,587
Less Final Retirement in year 2034	<u>-29,193,089</u>
Total Interim Retirements	<u>1,121,082</u>

Note:

Unit 1 Retirement at 2028 based on 65 year life span from 1963.

KENTUCKY POWER COMPANY  
DEPRECIATION STUDY AS OF DECEMBER 31, 2004  
CALCULATION OF AVERAGE REMAINING LIFE  
BIG SANDY PLANT, ACCOUNT 312  
RETIREMENT YEARS - UNIT 1 2028; UNIT 2 2034

ANNUAL INTERIM RETIREMENT RATE 0.0150

<u>YEAR</u>	<u>AMOUNT RETIRED</u>	<u>REM. LIFE (YEARS)</u>	<u>DOLLAR YEARS</u>	<u>AVERAGE REM. LIFE</u>
2005	4,868,080	0.5	2,434,040	
2006	4,868,080	1.5	7,302,121	
2007	6,497,604	2.5	16,244,011	
2008	4,843,638	3.5	16,952,731	
2009	11,361,735	4.5	51,127,806	
2010	4,745,866	5.5	26,102,264	
2011	4,745,866	6.5	30,848,130	
2012	4,745,866	7.5	35,593,996	
2013	4,745,866	8.5	40,339,862	
2014	4,745,866	9.5	45,085,728	
2015	4,745,866	10.5	49,831,594	
2016	4,745,866	11.5	54,577,460	
2017	4,745,866	12.5	59,323,326	
2018	4,745,866	13.5	64,069,192	
2019	4,745,866	14.5	68,815,059	
2020	4,745,866	15.5	73,560,925	
2021	4,745,866	16.5	78,306,791	
2022	4,745,866	17.5	83,052,657	
2023	4,745,866	18.5	87,798,523	
2024	4,745,866	19.5	92,544,389	
2025	4,745,866	20.5	97,290,255	
2026	4,745,866	21.5	102,036,121	
2027	4,745,866	22.5	106,781,987	
2028	11,641,100	23.5	273,565,853	
2029	4,642,438	24.5	113,739,721	
2030	4,642,438	25.5	118,382,159	
2031	4,642,438	26.5	123,024,596	
2032	4,642,438	27.5	127,667,034	
2033	4,642,438	28.5	132,309,472	
2034	171,820,680	29.5	5,068,710,045	
<b>TOTALS</b>	<b>324,538,695</b>		<b>7,247,417,849</b>	<b>22.33</b>

INTERIM RETIREMENTS:

Total Plant at 12/31/04	324,538,695
Less Retirement of Unit 1 in 2028	-6,895,234
Less Final Retirement in year 2034	<u>-171,820,680</u>
Total Interim Retirements	<u>145,822,781</u>

Note:

Unit 1 Retirement at 2028 based on 65 year life span from 1963.

KENTUCKY POWER COMPANY  
DEPRECIATION STUDY AS OF DECEMBER 31, 2004  
CALCULATION OF AVERAGE REMAINING LIFE  
BIG SANDY PLANT, ACCOUNT 314  
RETIREMENT YEARS - UNIT 1 2028; UNIT 2 2034

ANNUAL INTERIM RETIREMENT RATE 0.0127

<u>YEAR</u>	<u>AMOUNT RETIRED</u>	<u>REM. LIFE (YEARS)</u>	<u>DOLLAR YEARS</u>	<u>AVERAGE REM. LIFE</u>
2005	927,595	0.5	463,798	
2006	927,595	1.5	1,391,393	
2007	927,595	2.5	2,318,988	
2008	927,595	3.5	3,246,583	
2009	927,595	4.5	4,174,178	
2010	927,595	5.5	5,101,773	
2011	927,595	6.5	6,029,368	
2012	927,595	7.5	6,956,963	
2013	927,595	8.5	7,884,558	
2014	927,595	9.5	8,812,153	
2015	927,595	10.5	9,739,748	
2016	927,595	11.5	10,667,343	
2017	927,595	12.5	11,594,939	
2018	927,595	13.5	12,522,534	
2019	927,595	14.5	13,450,129	
2020	927,595	15.5	14,377,724	
2021	927,595	16.5	15,305,319	
2022	927,595	17.5	16,232,914	
2023	927,595	18.5	17,160,509	
2024	927,595	19.5	18,088,104	
2025	927,595	20.5	19,015,699	
2026	927,595	21.5	19,943,294	
2027	927,595	22.5	20,870,889	
2028	6,402,451	23.5	150,457,600	
2029	858,064	24.5	21,022,578	
2030	858,064	25.5	21,880,643	
2031	858,064	26.5	22,738,707	
2032	858,064	27.5	23,596,771	
2033	858,064	28.5	24,454,836	
2034	41,011,523	29.5	1,209,839,926	
<b>TOTALS</b>	<b>73,038,983</b>		<b>1,719,339,961</b>	<b>23.54</b>

INTERIM RETIREMENTS:

Total Plant at 12/31/04	73,038,983
Less Retirement of Unit 1 in 2028	-5,474,856
Less Final Retirement in year 2034	<u>-41,011,523</u>
Total Interim Retirements	<u>26,552,604</u>

Note:

Unit 1 Retirement at 2028 based on 65 year life span from 1963.

KENTUCKY POWER COMPANY  
DEPRECIATION STUDY AS OF DECEMBER 31, 2004  
CALCULATION OF AVERAGE REMAINING LIFE  
BIG SANDY PLANT, ACCOUNT 315  
RETIREMENT YEARS - UNIT 1 2028; UNIT 2 2034

ANNUAL INTERIM RETIREMENT RATE 0.0040

<u>YEAR</u>	<u>AMOUNT RETIRED</u>	<u>REM. LIFE (YEARS)</u>	<u>DOLLAR YEARS</u>	<u>AVERAGE REM. LIFE</u>
2005	54,970	0.5	27,485	
2006	54,970	1.5	82,456	
2007	54,970	2.5	137,426	
2008	54,970	3.5	192,396	
2009	54,970	4.5	247,367	
2010	54,970	5.5	302,337	
2011	54,970	6.5	357,308	
2012	54,970	7.5	412,278	
2013	54,970	8.5	467,248	
2014	54,970	9.5	522,219	
2015	54,970	10.5	577,189	
2016	54,970	11.5	632,160	
2017	54,970	12.5	687,130	
2018	54,970	13.5	742,100	
2019	54,970	14.5	797,071	
2020	54,970	15.5	852,041	
2021	54,970	16.5	907,012	
2022	54,970	17.5	961,982	
2023	54,970	18.5	1,016,952	
2024	54,970	19.5	1,071,923	
2025	54,970	20.5	1,126,893	
2026	54,970	21.5	1,181,864	
2027	54,970	22.5	1,236,834	
2028	1,520,180	23.5	35,724,239	
2029	49,110	24.5	1,203,184	
2030	49,110	25.5	1,252,294	
2031	49,110	26.5	1,301,403	
2032	49,110	27.5	1,350,513	
2033	49,110	28.5	1,399,623	
2034	10,712,553	29.5	316,020,328	
<b>TOTALS</b>	<b>13,742,601</b>		<b>372,791,256</b>	<b>27.13</b>

INTERIM RETIREMENTS:

Total Plant at 12/31/04	13,742,601
Less Retirement of Unit 1 in 2028	-1,465,210
Less Final Retirement in year 2034	<u>-10,712,553</u>
Total Interim Retirements	<u>1,564,838</u>

Note:

Unit 1 Retirement at 2028 based on 65 year life span from 1963.

KENTUCKY POWER COMPANY  
DEPRECIATION STUDY AS OF DECEMBER 31, 2004  
CALCULATION OF AVERAGE REMAINING LIFE  
BIG SANDY PLANT, ACCOUNT 316  
RETIREMENT YEARS - UNIT 1 2028; UNIT 2 2034

ANNUAL INTERIM RETIREMENT RATE 0.0058

<u>YEAR</u>	<u>AMOUNT RETIRED</u>	<u>REM. LIFE (YEARS)</u>	<u>DOLLAR YEARS</u>	<u>AVERAGE REM. LIFE</u>
2005	37,810	0.5	18,905	
2006	37,810	1.5	56,715	
2007	37,810	2.5	94,525	
2008	37,810	3.5	132,335	
2009	37,810	4.5	170,145	
2010	37,810	5.5	207,955	
2011	37,810	6.5	245,765	
2012	37,810	7.5	283,574	
2013	37,810	8.5	321,384	
2014	37,810	9.5	359,194	
2015	37,810	10.5	397,004	
2016	37,810	11.5	434,814	
2017	37,810	12.5	472,624	
2018	37,810	13.5	510,434	
2019	37,810	14.5	548,244	
2020	37,810	15.5	586,054	
2021	37,810	16.5	623,864	
2022	37,810	17.5	661,674	
2023	37,810	18.5	699,484	
2024	37,810	19.5	737,294	
2025	37,810	20.5	775,104	
2026	37,810	21.5	812,914	
2027	37,810	22.5	850,723	
2028	828,981	23.5	19,481,052	
2029	33,221	24.5	813,918	
2030	33,221	25.5	847,139	
2031	33,221	26.5	880,360	
2032	33,221	27.5	913,581	
2033	33,221	28.5	946,803	
2034	4,654,239	29.5	137,300,047	
<b>TOTALS</b>	<b>6,518,954</b>		<b>171,183,628</b>	<b>26.26</b>

INTERIM RETIREMENTS:

Total Plant at 12/31/04	6,518,954
Less Retirement of Unit 1 in 2028	-791,171
Less Final Retirement in year 2034	<u>-4,654,239</u>
Total Interim Retirements	<u>1,073,544</u>

Note:

Unit 1 Retirement at 2028 based on 65 year life span from 1963.

**Exhibit\_\_\_(MJM-5)**

**Snavely King Majoros O'Connor & Lee, Inc.**

**Depreciation Study**

**Net Salvage**

Kentucky Power Company  
Case No. 2005-00341

Five-Year Average Net Salvage Experience  
2000-2004

<u>Year</u>	<u>Gross Salvage</u>	<u>COR</u>	<u>Net Salvage</u>
<b><u>Production Plant</u></b>			
2000	1,711	203,653	(201,942)
2001	172,103	(80,513)	252,616
2002	30,879	55,395	(24,516)
2003	(28,698)	1,578,174	(1,606,872)
2004	39,639	4,362,183	(4,322,544)
<b>5-Year Total</b>	<b>215,634</b>	<b>6,118,892</b>	<b>(5,903,258)</b>
<b>5-Year Avg.</b>	<b>43,127</b>	<b>1,223,778</b>	<b>(1,180,652)</b>
<b><u>Transmission Plant</u></b>			
2000	23,740	53,562	(29,822)
2001	101,608	823,970	(722,362)
2002	(31,282)	(54,593)	23,311
2003	305,945	1,074,786	(768,841)
2004	365,788	204,960	160,828
<b>5-Year Total</b>	<b>765,799</b>	<b>2,102,685</b>	<b>(1,336,886)</b>
<b>5-Year Avg.</b>	<b>153,160</b>	<b>420,537</b>	<b>(267,377)</b>
<b><u>Distribution Plant</u></b>			
2000	1,501,740	213,654	1,288,086
2001	2,190,111	2,918,529	(728,418)
2002	5,075,585	1,403,071	3,672,514
2003	1,560,605	1,192,686	367,919
2004	2,946,107	1,979,653	966,454
<b>5-Year Total</b>	<b>13,274,148</b>	<b>7,707,593</b>	<b>5,566,555</b>
<b>5-Year Avg.</b>	<b>2,654,830</b>	<b>1,541,519</b>	<b>1,113,311</b>
<b><u>General Plant</u></b>			
2000	-	(35,438)	35,438
2001	-	8,861	(8,861)
2002	-	-	-
2003	(100,160)	146,609	(246,769)
2004	1,932,476	-	1,932,476
<b>5-Year Total</b>	<b>1,832,316</b>	<b>120,032</b>	<b>1,712,284</b>
<b>5-Year Avg.</b>	<b>366,463</b>	<b>24,006</b>	<b>342,457</b>
<b><u>Total Plant</u></b>			
2000	1,527,191	435,431	1,091,760
2001	2,463,822	3,670,847	(1,207,025)
2002	5,075,182	1,403,873	3,671,309
2003	1,737,692	3,992,255	(2,254,563)
2004	5,284,010	6,546,796	(1,262,786)
<b>5-Year Total</b>	<b>16,087,897</b>	<b>16,049,202</b>	<b>38,695</b>
<b>5-Year Avg.</b>	<b>3,217,579</b>	<b>3,209,840</b>	<b>7,739</b>

Source: "PSALV.dat", "TSALV.dat", "DSALV.dat" and "GSALV.dat", matched to hardcopy of files provided in Henderson Workpapers (included as pages 4-14 of this exhibit).

KENTUCKY POWER COMPANY  
Depreciation Study as of December 31, 2004  
Production Plant  
Calculation of Gross Salvage

<u>Account</u> (1)	<u>Interim Retirements</u> (2)	<u>Interim Gross Salvage Percent</u> (3)	<u>Salvage on Interim Ret.</u> (4)=(2)*(3)	<u>Plant In-Service at 12/31/04</u> (5)	<u>Salvage as % of Plant</u> (6)=(4)/(5)
311	\$ 1,121,082	8.8%	\$ 99,086	\$ 36,149,758	0%
312	145,822,781	8.8%	12,888,502	324,538,695	4%
314	26,552,604	8.8%	2,346,844	73,038,983	3%
315	1,564,838	8.8%	138,308	13,742,601	1%
316	<u>1,073,544</u>	8.8%	<u>94,885</u>	<u>6,518,954</u>	1%
Total	\$ 176,134,849		\$ 15,567,625	\$ 453,988,991	

Sources:

Col. (2) from Exhibit\_\_\_(MJM-4).

Cols. (3) and (5) from ProductionAnalysis.xls (provided in response to AG 1-105 and Henderson Wkprs, p. 3.

KENTUCKY POWER COMPANY  
GROSS SALVAGE FACTORS  
TRANSMISSION, DISTRIBUTION AND GENERAL PLANT

	<u>Salvage Factor</u>
<u>TRANSMISSION PLANT</u>	
350.1	Rights of Way 0%
352.0	Structures & Improvements 10%
353.0	Station Equipment 35%
354.0	Towers & Fixtures 0%
355.0	Poles & Fixtures 0%
356.0	OH Cond. & Devices 20%
357.0	Underground Conduit 0%
358.0	Underground Conductor and Devices 0%
<u>DISTRIBUTION PLANT</u>	
360.1	Rights of Way 0%
361.0	Structures & Improvements 10%
362.0	Station Equipment 35%
364.0	Poles, Towers, & Fixtures 25%
365.0	Overhead Conductor & Devices 40%
366.0	Underground Conduit 0%
367.0	Underground Conductor 15%
368.0	Line Transformers 40%
369.0	Services 15%
370.0	Meters 30%
371.0	Installations on Custs. Prem. 30%
373.0	Street Lighting & Signal Sys. 10%
<u>GENERAL PLANT</u>	
389.2	Rights of Way 0%
390.0	Structures & Improvements 12%
391.0	Office Furniture & Equipment 0%
392.0	Transportation Equipment 0%
393.0	Stores Equipment 0%
394.0	Tools Shop & Garage Equipment 0%
395.0	Laboratory Equipment 0%
396.0	Power Operated Equipment 0%
397.0	Communication Equipment 10%
398.0	Miscellaneous Equipment 0%

Source:  
Exhibit JEH-1, Schedule III.

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DELOITTE HASKINS & SELLS

DEPRECIATION SYSTEM - DSALVG01 RELEASE 5.0

STUDY AS OF DECEMBER 31, 2004

PAGE 1

KENTUCKY POWER COMPANY  
ACCOUNT NO : 10P10000  
PRODUCTION PLANT

7-15-2005

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIMB.	W/O REIMB.
1960	0.	0.	0.	0.%	450.	0.%	3141.	0.%	0.%	0.%
1961	0.	0.	0.	0.%	365.	0.%	250.	0.%	0.%	0.%
1964	0.	12972.	0.	0.%	2350.	18.%	559.	4.%	14.%	14.%
1965	0.	8393.	0.	0.%	63.	1.%	1353.	16.%	-15.%	-15.%
1966	0.	28356.	0.	0.%	1639.	6.%	1309.	5.%	1.%	1.%
1967	0.	72923.	0.	0.%	50088.	69.%	207.	0.%	68.%	68.%
1968	0.	128116.	0.	0.%	3717.	3.%	11276.	9.%	-6.%	-6.%
1969	0.	6226.	0.	0.%	0.	0.%	0.	0.%	0.%	0.%
1970	0.	765565.	0.	0.%	38983.	5.%	20261.	3.%	2.%	2.%
1971	0.	126096.	0.	0.%	2831.	2.%	42474.	34.%	-31.%	-31.%
1972	0.	26254.	0.	0.%	8641.	33.%	3092.	12.%	21.%	21.%
1973	0.	40145.	0.	0.%	3905.	10.%	76655.	191.%	-181.%	-181.%
1974	0.	172218.	0.	0.%	661.	0.%	756.	0.%	0.%	0.%
1975	0.	123712.	0.	0.%	8539.	7.%	28002.	23.%	-16.%	-16.%
1976	0.	1145237.	0.	0.%	9669.	1.%	56912.	5.%	-4.%	-4.%
1977	0.	753812.	0.	0.%	78585.	10.%	111093.	15.%	-4.%	-4.%
1978	0.	280923.	0.	0.%	1491.	1.%	20757.	7.%	-7.%	-7.%
1979	0.	1978089.	0.	0.%	83069.	4.%	278953.	14.%	-10.%	-10.%
1980	0.	1539921.	0.	0.%	5630.	0.%	126933.	8.%	-8.%	-8.%
1981	0.	1729730.	0.	0.%	3569.	0.%	573164.	33.%	-33.%	-33.%
1982	0.	1674621.	0.	0.%	55571.	3.%	704047.	42.%	-39.%	-39.%
1983	0.	1127403.	0.	0.%	12461.	1.%	49042.	4.%	-3.%	-3.%
1984	0.	597900.	0.	0.%	724.	0.%	112419.	19.%	-19.%	-19.%
1985	0.	101983.	0.	0.%	69625.	68.%	537959.	527.%	-459.%	-459.%
1986	0.	1341809.	0.	0.%	69408.	5.%	10759.	1.%	4.%	4.%
1987	0.	1296541.	0.	0.%	671733.	52.%	386860.	30.%	22.%	22.%
1988	0.	1239413.	0.	0.%	146691.	12.%	1881634.	152.%	-140.%	-140.%
1989	0.	3675101.	0.	0.%	1495274.	41.%	264645.	7.%	33.%	33.%
1990	0.	1974433.	0.	0.%	435816.	22.%	814536.	41.%	-19.%	-19.%
1991	0.	1154968.	0.	0.%	25400.	2.%	311112.	27.%	-25.%	-25.%
1992	0.	2617525.	0.	0.%	866774.	33.%	427592.	16.%	17.%	17.%
1993	0.	3236184.	0.	0.%	-34358.	-1.%	1578355.	49.%	-50.%	-50.%
1994	0.	3969598.	0.	0.%	60472.	2.%	2038522.	51.%	-50.%	-50.%
1995	0.	6338609.	0.	0.%	1919772.	30.%	2274820.	36.%	-6.%	-6.%
1996	0.	2883635.	0.	0.%	-108297.	-4.%	2268116.	79.%	-82.%	-82.%
1997	0.	8213501.	0.	0.%	1622235.	20.%	1652784.	20.%	0.%	0.%
1998	0.	1885004.	0.	0.%	-109746.	-6.%	2094579.	111.%	-117.%	-117.%
1999	0.	474672.	0.	0.%	3780.	1.%	8266.	2.%	-1.%	-1.%
2000	0.	855616.	0.	0.%	1711.	0.%	203653.	24.%	-24.%	-24.%
2001	0.	543659.	0.	0.%	172103.	32.%	-80513.	-15.%	46.%	46.%
2002	0.	875114.	0.	0.%	30879.	4.%	55395.	6.%	-3.%	-3.%
2003	0.	17253619.	0.	0.%	-28698.	0.%	1578174.	9.%	-9.%	-9.%

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STUDY AS OF DECEMBER 31, 2004

PAGE 2

KENTUCKY POWER COMPANY  
ACCOUNT NO.: 10610000  
PRODUCTION PLANT

7-16-2005

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIMB.	W/O REIMB.
2004	0.	3134846.	0.	0.%	39640.	1.%	4362183.	139.%	-138.%	-138.%
	0.	75404442.	0.	0.%	7723215.	10.%	24892086.	33.%	-23.%	-23.%
ROLLING BAND										
1960-1974	0.	1387264.	0.	0.%	113693.	8.%	161333.	12.%	-3.%	-3.%
1961-1975	0.	1510976.	0.	0.%	121782.	8.%	186194.	12.%	-4.%	-4.%
1962-1976	0.	2656213.	0.	0.%	131086.	5.%	242856.	9.%	-4.%	-4.%
1963-1977	0.	3410025.	0.	0.%	209671.	6.%	353949.	10.%	-4.%	-4.%
1964-1978	0.	3690948.	0.	0.%	211162.	6.%	374706.	10.%	-4.%	-4.%
1965-1979	0.	5656065.	0.	0.%	291881.	5.%	653100.	12.%	-6.%	-6.%
1966-1980	0.	7187593.	0.	0.%	297448.	4.%	778680.	11.%	-7.%	-7.%
1967-1981	0.	8888967.	0.	0.%	299378.	3.%	1350535.	15.%	-12.%	-12.%
1968-1982	0.	10490665.	0.	0.%	304861.	3.%	2054375.	20.%	-17.%	-17.%
1969-1983	0.	11489952.	0.	0.%	313605.	3.%	2092141.	18.%	-15.%	-15.%
1970-1984	0.	12081626.	0.	0.%	314329.	3.%	2204560.	18.%	-16.%	-16.%
1971-1985	0.	11418044.	0.	0.%	344971.	3.%	2722258.	24.%	-21.%	-21.%
1972-1986	0.	12633757.	0.	0.%	411548.	3.%	2690543.	21.%	-18.%	-18.%
1973-1987	0.	13904044.	0.	0.%	1074640.	8.%	3074311.	22.%	-14.%	-14.%
1974-1988	0.	15103312.	0.	0.%	1217426.	8.%	4879290.	32.%	-24.%	-24.%
1975-1989	0.	18606195.	0.	0.%	2712039.	15.%	5143179.	28.%	-13.%	-13.%
1976-1990	0.	20456916.	0.	0.%	3139316.	15.%	5929713.	29.%	-14.%	-14.%
1977-1991	0.	20466647.	0.	0.%	3155047.	15.%	6183913.	30.%	-15.%	-15.%
1978-1992	0.	22330360.	0.	0.%	3943236.	18.%	6500412.	29.%	-11.%	-11.%
1979-1993	0.	25285621.	0.	0.%	3907387.	15.%	8058010.	32.%	-16.%	-16.%
1980-1994	0.	27277130.	0.	0.%	3884790.	14.%	9817579.	36.%	-22.%	-22.%
1981-1995	0.	32075818.	0.	0.%	5798932.	18.%	11965466.	37.%	-19.%	-19.%
1982-1996	0.	33229723.	0.	0.%	5687066.	17.%	13660418.	41.%	-24.%	-24.%
1983-1997	0.	39768603.	0.	0.%	7253730.	18.%	14609155.	37.%	-18.%	-18.%
1984-1998	0.	40526204.	0.	0.%	7131523.	18.%	16654692.	41.%	-23.%	-23.%
1985-1999	0.	40402976.	0.	0.%	7134579.	18.%	16550539.	41.%	-23.%	-23.%
1986-2000	0.	41156609.	0.	0.%	7066665.	17.%	16216233.	39.%	-22.%	-22.%
1987-2001	0.	40358459.	0.	0.%	7169360.	18.%	16124961.	40.%	-22.%	-22.%
1988-2002	0.	39937032.	0.	0.%	6528506.	16.%	15793496.	40.%	-23.%	-23.%
1989-2003	0.	55951238.	0.	0.%	6353117.	11.%	15490036.	28.%	-16.%	-16.%
1990-2004	0.	55410983.	0.	0.%	4897483.	9.%	19587574.	35.%	-27.%	-27.%

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STUDY AS OF DECEMBER 31, 2004

PAGE 1

KENTUCKY POWER COMPANY  
ACCOUNT NO.: 10850000  
TRANSMISSION PLANT

7-13-2005

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIMB.	W/O REIMB.
1954	0.	34583.	0.	0.%	15298.	44.%	7180.	21.%	23.%	23.%
1955	0.	47135.	0.	0.%	23025.	49.%	7889.	17.%	32.%	32.%
1956	0.	22861.	0.	0.%	5024.	22.%	5258.	23.%	-1.%	-1.%
1957	0.	134912.	0.	0.%	42741.	32.%	10113.	7.%	24.%	24.%
1958	0.	89413.	0.	0.%	39278.	44.%	23451.	26.%	18.%	18.%
1959	0.	109562.	0.	0.%	56914.	52.%	10968.	10.%	42.%	42.%
1960	0.	120308.	0.	0.%	25114.	21.%	12000.	10.%	11.%	11.%
1961	0.	97570.	0.	0.%	58122.	60.%	19975.	20.%	39.%	39.%
1962	0.	105122.	0.	0.%	48139.	46.%	35762.	34.%	12.%	12.%
1963	0.	81024.	0.	0.%	76939.	95.%	10727.	13.%	82.%	82.%
1964	0.	44999.	0.	0.%	2529.	6.%	8623.	19.%	-14.%	-14.%
1965	0.	456939.	0.	0.%	129041.	28.%	138735.	30.%	-2.%	-2.%
1966	0.	202844.	0.	0.%	54393.	27.%	73574.	36.%	-9.%	-9.%
1967	0.	378070.	0.	0.%	64988.	17.%	112497.	30.%	-13.%	-13.%
1968	0.	241351.	0.	0.%	13413.	6.%	57522.	24.%	-18.%	-18.%
1969	0.	600025.	0.	0.%	103002.	17.%	103107.	17.%	0.%	0.%
1970	0.	52004.	0.	0.%	17779.	34.%	12589.	24.%	10.%	10.%
1971	0.	153003.	0.	0.%	55726.	36.%	28344.	19.%	18.%	18.%
1972	0.	166793.	0.	0.%	56538.	34.%	36030.	22.%	12.%	12.%
1973	0.	238120.	0.	0.%	192316.	81.%	49235.	21.%	60.%	60.%
1974	0.	230313.	0.	0.%	339163.	147.%	45869.	20.%	127.%	127.%
1975	0.	137446.	0.	0.%	129176.	94.%	69379.	50.%	44.%	44.%
1976	0.	789389.	0.	0.%	143997.	18.%	32216.	4.%	14.%	14.%
1977	0.	250212.	0.	0.%	225156.	90.%	1431.	1.%	89.%	89.%
1978	0.	422125.	0.	0.%	-37889.	-9.%	-17686.	-4.%	-5.%	-5.%
1979	0.	138790.	0.	0.%	60197.	43.%	145231.	105.%	-61.%	-61.%
1980	0.	740426.	0.	0.%	303867.	41.%	118565.	16.%	25.%	25.%
1981	0.	1235156.	0.	0.%	137039.	11.%	72785.	6.%	5.%	5.%
1982	0.	348126.	0.	0.%	306936.	88.%	146727.	42.%	46.%	46.%
1983	0.	133764.	0.	0.%	137997.	103.%	79939.	60.%	43.%	43.%
1984	0.	248203.	0.	0.%	51497.	21.%	68152.	27.%	-7.%	-7.%
1985	0.	407649.	0.	0.%	306076.	75.%	38164.	9.%	66.%	66.%
1986	0.	620920.	0.	0.%	22842.	4.%	175660.	28.%	-25.%	-25.%
1987	0.	205446.	0.	0.%	197229.	96.%	69955.	34.%	62.%	62.%
1988	0.	325128.	0.	0.%	276527.	85.%	110394.	34.%	51.%	51.%
1989	0.	950539.	0.	0.%	370387.	39.%	122039.	13.%	26.%	26.%
1990	0.	455000.	0.	0.%	64159.	14.%	296114.	65.%	-51.%	-51.%
1991	0.	863065.	0.	0.%	59121.	7.%	327755.	38.%	-31.%	-31.%
1992	0.	1871867.	0.	0.%	1163291.	62.%	422506.	23.%	40.%	40.%
1993	0.	748707.	0.	0.%	-228274.	-30.%	245842.	33.%	-63.%	-63.%
1994	0.	908689.	0.	0.%	194052.	21.%	92692.	10.%	11.%	11.%
1995	0.	220890.	0.	0.%	42611.	19.%	151723.	69.%	-49.%	-49.%

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PAGE 2

KENTUCKY POWER COMPANY  
ACCOUNT NO.: 10850000  
TRANSMISSION PLANT

7-13-2005

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIMB.	W/O REIMB.
1996	0.	-25138.	0.	0.%	-5644.	22.%	-6225.	25.%	-2.%	-2.%
1997	0.	984775.	0.	0.%	51684.	5.%	39136.	4.%	1.%	1.%
1998	0.	265039.	0.	0.%	284212.	107.%	215982.	81.%	26.%	26.%
1999	0.	1131697.	0.	0.%	231775.	20.%	33535.	3.%	18.%	18.%
2000	0.	727893.	0.	0.%	23740.	3.%	53562.	7.%	-4.%	-4.%
2001	0.	243225.	0.	0.%	101608.	42.%	823970.	339.%	-297.%	-297.%
2002	0.	433622.	0.	0.%	-31282.	-7.%	-54593.	-13.%	5.%	5.%
2003	0.	590516.	0.	0.%	305945.	52.%	1074786.	182.%	-130.%	-130.%
2004	0.	1107137.	0.	0.%	365788.	33.%	204960.	19.%	15.%	15.%
	0.	21087254.	0.	0.%	6673302.	32.%	5964144.	28.%	3.%	3.%
ROLLING BAND										
1954-1968	0.	2166693.	0.	0.%	654958.	30.%	534274.	25.%	6.%	6.%
1955-1969	0.	2732135.	0.	0.%	742662.	27.%	630201.	23.%	4.%	4.%
1956-1970	0.	2737004.	0.	0.%	737416.	27.%	634901.	23.%	4.%	4.%
1957-1971	0.	2867146.	0.	0.%	788118.	27.%	657987.	23.%	5.%	5.%
1958-1972	0.	2899027.	0.	0.%	801915.	28.%	683904.	24.%	4.%	4.%
1959-1973	0.	3047734.	0.	0.%	954953.	31.%	709688.	23.%	8.%	8.%
1960-1974	0.	3168485.	0.	0.%	1237202.	39.%	744589.	23.%	16.%	16.%
1961-1975	0.	3185623.	0.	0.%	1341264.	42.%	801968.	25.%	17.%	17.%
1962-1976	0.	3877442.	0.	0.%	1427139.	37.%	814209.	21.%	16.%	16.%
1963-1977	0.	4022532.	0.	0.%	1604156.	40.%	779878.	19.%	20.%	20.%
1964-1978	0.	4363633.	0.	0.%	1489328.	34.%	751465.	17.%	17.%	17.%
1965-1979	0.	4457424.	0.	0.%	1546996.	35.%	888073.	20.%	15.%	15.%
1966-1980	0.	4740911.	0.	0.%	1721822.	36.%	867903.	18.%	18.%	18.%
1967-1981	0.	5773223.	0.	0.%	1804468.	31.%	867114.	15.%	16.%	16.%
1968-1982	0.	5743279.	0.	0.%	2046416.	36.%	901344.	16.%	20.%	20.%
1969-1983	0.	5635692.	0.	0.%	2171000.	39.%	923761.	16.%	22.%	22.%
1970-1984	0.	5283870.	0.	0.%	2119495.	40.%	888806.	17.%	23.%	23.%
1971-1985	0.	5639515.	0.	0.%	2407792.	43.%	914381.	16.%	26.%	26.%
1972-1986	0.	6107432.	0.	0.%	2374908.	39.%	1061697.	17.%	22.%	22.%
1973-1987	0.	6146085.	0.	0.%	2515599.	41.%	1095622.	18.%	23.%	23.%
1974-1988	0.	6233093.	0.	0.%	2599810.	42.%	1156781.	19.%	23.%	23.%
1975-1989	0.	6953319.	0.	0.%	2631034.	38.%	1232951.	18.%	20.%	20.%
1976-1990	0.	7270873.	0.	0.%	2566017.	35.%	1459686.	20.%	15.%	15.%
1977-1991	0.	7344549.	0.	0.%	2481141.	34.%	1755225.	24.%	10.%	10.%
1978-1992	0.	8966204.	0.	0.%	3419276.	38.%	2176300.	24.%	14.%	14.%
1979-1993	0.	9292786.	0.	0.%	3228891.	35.%	2439828.	26.%	8.%	8.%
1980-1994	0.	10062685.	0.	0.%	3362746.	33.%	2387289.	24.%	10.%	10.%

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KENTUCKY POWER COMPANY  
ACCOUNT NO.: 10850000  
TRANSMISSION PLANT

7-13-2005

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIME.	W/O REIME.
1981-1995	0.	9543149.	0.	0.%	3101490.	32.%	2420447.	25.%	7.%	7.%
1982-1996	0.	8282855.	0.	0.%	2958807.	36.%	2341437.	28.%	7.%	7.%
1983-1997	0.	8919504.	0.	0.%	2703555.	30.%	2233846.	25.%	5.%	5.%
1984-1998	0.	9050779.	0.	0.%	2849770.	31.%	2369889.	26.%	5.%	5.%
1985-1999	0.	9934273.	0.	0.%	3030048.	31.%	2335272.	24.%	7.%	7.%
1986-2000	0.	10254517.	0.	0.%	2747712.	27.%	2350670.	23.%	4.%	4.%
1987-2001	0.	9876822.	0.	0.%	2826478.	29.%	2998980.	30.%	-2.%	-2.%
1988-2002	0.	10104998.	0.	0.%	2597967.	26.%	2874432.	28.%	-3.%	-3.%
1989-2003	0.	10370386.	0.	0.%	2627385.	25.%	3838824.	37.%	-12.%	-12.%
1990-2004	0.	10526984.	0.	0.%	2622786.	25.%	3921745.	37.%	-12.%	-12.%

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KENTUCKY POWER COMPANY  
ACCOUNT NO. 10860000  
DISTRIBUTION PLANT

7-13-2005

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIMB.	W/O REIMB.
1954	0.	345614.	0.	0.%	164293.	48.%	66201.	19.%	28.%	28.%
1955	0.	329795.	0.	0.%	163818.	50.%	68960.	21.%	29.%	29.%
1956	0.	340400.	0.	0.%	175639.	52.%	81844.	24.%	28.%	28.%
1957	0.	560530.	0.	0.%	243234.	43.%	141931.	25.%	18.%	18.%
1958	0.	505375.	0.	0.%	206808.	41.%	144792.	29.%	12.%	12.%
1959	0.	624939.	0.	0.%	259031.	41.%	152087.	24.%	17.%	17.%
1960	0.	492849.	0.	0.%	271181.	55.%	161636.	33.%	22.%	22.%
1961	0.	819969.	0.	0.%	381111.	46.%	170331.	21.%	26.%	26.%
1962	0.	558196.	0.	0.%	299388.	54.%	192682.	35.%	19.%	19.%
1963	0.	706977.	0.	0.%	279116.	39.%	194420.	28.%	12.%	12.%
1964	0.	773027.	0.	0.%	304668.	39.%	189822.	25.%	15.%	15.%
1965	0.	1012221.	0.	0.%	374123.	37.%	239135.	24.%	13.%	13.%
1966	0.	1071099.	0.	0.%	450349.	42.%	285103.	27.%	15.%	15.%
1967	0.	1463163.	0.	0.%	413889.	28.%	342901.	23.%	5.%	5.%
1968	0.	1330710.	0.	0.%	670448.	50.%	479783.	36.%	14.%	14.%
1969	0.	1560135.	0.	0.%	646533.	41.%	347617.	22.%	19.%	19.%
1970	0.	1143715.	0.	0.%	400222.	35.%	357897.	31.%	4.%	4.%
1971	0.	1315603.	0.	0.%	543957.	41.%	401721.	31.%	11.%	11.%
1972	0.	1475429.	0.	0.%	752589.	51.%	490837.	33.%	18.%	18.%
1973	0.	1773250.	0.	0.%	703812.	40.%	491738.	28.%	12.%	12.%
1974	0.	1273997.	0.	0.%	921165.	72.%	527796.	41.%	31.%	31.%
1975	0.	1413889.	0.	0.%	633350.	45.%	485488.	34.%	10.%	10.%
1976	0.	1770503.	0.	0.%	905056.	51.%	680443.	38.%	13.%	13.%
1977	0.	1790525.	0.	0.%	1032217.	58.%	928730.	52.%	6.%	6.%
1978	0.	2839810.	0.	0.%	1622814.	57.%	952797.	34.%	24.%	24.%
1979	0.	2379695.	0.	0.%	1368931.	58.%	1048294.	44.%	13.%	13.%
1980	0.	3067886.	0.	0.%	1455926.	47.%	1423814.	46.%	1.%	1.%
1981	0.	4492306.	0.	0.%	1883382.	42.%	1737241.	39.%	3.%	3.%
1982	0.	2552584.	0.	0.%	1586478.	62.%	1503023.	59.%	3.%	3.%
1983	0.	3917704.	0.	0.%	1560432.	40.%	1361570.	35.%	5.%	5.%
1984	0.	2274942.	0.	0.%	1275047.	56.%	1464480.	64.%	-8.%	-8.%
1985	0.	3390814.	0.	0.%	1033246.	30.%	1315547.	39.%	-8.%	-8.%
1986	0.	4122421.	0.	0.%	1703914.	41.%	1814294.	44.%	-3.%	-3.%
1987	0.	5062869.	0.	0.%	2341368.	46.%	1686747.	33.%	13.%	13.%
1988	0.	5092695.	0.	0.%	2009198.	39.%	1881879.	37.%	3.%	3.%
1989	0.	7285672.	0.	0.%	5727263.	79.%	1888999.	26.%	53.%	53.%
1990	0.	6337485.	0.	0.%	2563490.	40.%	2433166.	38.%	2.%	2.%
1991	0.	5330583.	0.	0.%	1639592.	31.%	2601095.	49.%	-18.%	-18.%
1992	0.	5047537.	0.	0.%	1220353.	24.%	2236974.	44.%	-20.%	-20.%
1993	0.	4862356.	0.	0.%	1829402.	38.%	2197784.	45.%	-8.%	-8.%
1994	0.	5874830.	0.	0.%	2155099.	37.%	1954453.	33.%	3.%	3.%
1995	0.	7390800.	0.	0.%	2159120.	29.%	2119861.	29.%	1.%	1.%

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KENTUCKY POWER COMPANY  
ACCOUNT NO.: 10860000  
DISTRIBUTION PLANT

7-13-2005

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIMB.	W/O REIMB.
1996	0.	6260150.	0.	0.%	1342053.	21.%	1245388.	20.%	2.%	2.%
1997	0.	8613849.	0.	0.%	1918643.	22.%	1444506.	17.%	6.%	6.%
1998	0.	5385836.	0.	0.%	1292253.	24.%	804413.	15.%	9.%	9.%
1999	0.	4764283.	0.	0.%	440710.	9.%	262682.	6.%	4.%	4.%
2000	0.	7883448.	0.	0.%	1501740.	19.%	213654.	3.%	16.%	16.%
2001	0.	5934590.	0.	0.%	2190111.	37.%	2918529.	49.%	-12.%	-12.%
2002	0.	6806995.	0.	0.%	5075585.	75.%	1403071.	21.%	54.%	54.%
2003	0.	5434672.	0.	0.%	1560605.	29.%	1192686.	22.%	7.%	7.%
2004	0.	7250554.	0.	0.%	2946107.	41.%	1979653.	27.%	13.%	13.%
	0.	164109276.	0.	0.%	64598859.	39.%	50710495.	31.%	8.%	8.%

ROLLING BAND

1954-1968	0.	10934864.	0.	0.%	4657096.	43.%	2911628.	27.%	16.%	16.%
1955-1969	0.	12149385.	0.	0.%	5139336.	42.%	3193044.	26.%	16.%	16.%
1956-1970	0.	12963305.	0.	0.%	5375740.	41.%	3481981.	27.%	15.%	15.%
1957-1971	0.	13938508.	0.	0.%	5744058.	41.%	3801858.	27.%	14.%	14.%
1958-1972	0.	14853407.	0.	0.%	6253413.	42.%	4150764.	28.%	14.%	14.%
1959-1973	0.	16121282.	0.	0.%	6750417.	42.%	4497710.	28.%	14.%	14.%
1960-1974	0.	16770340.	0.	0.%	7412551.	44.%	4873419.	29.%	15.%	15.%
1961-1975	0.	17691380.	0.	0.%	7774720.	44.%	5197271.	29.%	15.%	15.%
1962-1976	0.	18641914.	0.	0.%	8298665.	45.%	5707383.	31.%	14.%	14.%
1963-1977	0.	19874243.	0.	0.%	9031494.	45.%	6443431.	32.%	13.%	13.%
1964-1978	0.	22007076.	0.	0.%	10375192.	47.%	7201808.	33.%	14.%	14.%
1965-1979	0.	23613744.	0.	0.%	11439455.	48.%	8060280.	34.%	14.%	14.%
1966-1980	0.	25669409.	0.	0.%	12521258.	49.%	9244959.	36.%	13.%	13.%
1967-1981	0.	29090616.	0.	0.%	13954291.	48.%	10697097.	37.%	11.%	11.%
1968-1982	0.	30180037.	0.	0.%	15126880.	50.%	11857219.	39.%	11.%	11.%
1969-1983	0.	32767031.	0.	0.%	16016864.	49.%	12739006.	39.%	10.%	10.%
1970-1984	0.	33481838.	0.	0.%	16645378.	50.%	13855869.	41.%	8.%	8.%
1971-1985	0.	35728937.	0.	0.%	17278402.	48.%	14813519.	41.%	7.%	7.%
1972-1986	0.	38535755.	0.	0.%	18438359.	48.%	16226092.	42.%	6.%	6.%
1973-1987	0.	42123195.	0.	0.%	20027138.	48.%	17422002.	41.%	6.%	6.%
1974-1988	0.	45442640.	0.	0.%	21332524.	47.%	18812143.	41.%	6.%	6.%
1975-1989	0.	51454315.	0.	0.%	26138622.	51.%	20173346.	39.%	12.%	12.%
1976-1990	0.	56377911.	0.	0.%	28068762.	50.%	22121024.	39.%	11.%	11.%
1977-1991	0.	59937991.	0.	0.%	28803298.	48.%	24041676.	40.%	8.%	8.%
1978-1992	0.	63195003.	0.	0.%	28991434.	46.%	25349920.	40.%	6.%	6.%
1979-1993	0.	65217549.	0.	0.%	29198022.	45.%	26594907.	41.%	4.%	4.%
1980-1994	0.	68712684.	0.	0.%	29984190.	44.%	27501066.	40.%	4.%	4.%

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KENTUCKY POWER COMPANY  
ACCOUNT NO.: 10850000  
DISTRIBUTION PLANT

7-13-2005

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIMB.	W/O REIMB.
1981-1995	0.	73035598.	0.	0.%	30687384.	42.%	28197113.	39.%	3.%	3.%
1982-1996	0.	74803442.	0.	0.%	30146055.	40.%	27705260.	37.%	3.%	3.%
1983-1997	0.	80864707.	0.	0.%	30478220.	38.%	27646743.	34.%	4.%	4.%
1984-1998	0.	82332839.	0.	0.%	30210041.	37.%	27089586.	33.%	4.%	4.%
1985-1999	0.	84822180.	0.	0.%	29375704.	35.%	25887788.	31.%	4.%	4.%
1986-2000	0.	89314814.	0.	0.%	29844198.	33.%	24785895.	28.%	6.%	6.%
1987-2001	0.	91126983.	0.	0.%	30330395.	33.%	25890130.	28.%	5.%	5.%
1988-2002	0.	92871109.	0.	0.%	33064612.	36.%	25606454.	28.%	8.%	8.%
1989-2003	0.	93213086.	0.	0.%	32616019.	35.%	24917261.	27.%	8.%	8.%
1990-2004	0.	93177968.	0.	0.%	29834863.	32.%	25007915.	27.%	5.%	5.%

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KENTUCKY POWER COMPANY  
ACCOUNT NO.: 10872000  
GENERAL PLANT

7-15-2005

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIMB.	W/O REIMB.
1954	0.	6604.	0.	0.%	1932.	29.%	857.	13.%	16.%	16.%
1955	0.	4156.	0.	0.%	1153.	28.%	296.	7.%	21.%	21.%
1956	0.	11547.	0.	0.%	1175.	10.%	56.	0.%	10.%	10.%
1957	0.	17234.	0.	0.%	741.	4.%	261.	2.%	3.%	3.%
1958	0.	15852.	0.	0.%	631.	4.%	1442.	9.%	-5.%	-5.%
1959	0.	7961.	0.	0.%	315.	4.%	238.	3.%	1.%	1.%
1960	0.	35975.	0.	0.%	3171.	9.%	2193.	6.%	3.%	3.%
1961	0.	32219.	0.	0.%	1414.	4.%	949.	3.%	1.%	1.%
1962	0.	5803.	0.	0.%	3494.	60.%	1607.	28.%	33.%	33.%
1963	0.	29313.	0.	0.%	2469.	8.%	3333.	11.%	-3.%	-3.%
1964	0.	66108.	0.	0.%	570.	1.%	4221.	6.%	-6.%	-6.%
1965	0.	162447.	0.	0.%	888.	1.%	3091.	2.%	-1.%	-1.%
1966	0.	2451.	0.	0.%	342.	14.%	9583.	391.%	-377.%	-377.%
1967	0.	12153.	0.	0.%	3237.	27.%	-2422.	-20.%	47.%	47.%
1968	0.	24450.	0.	0.%	1281.	5.%	623.	3.%	3.%	3.%
1969	0.	97196.	0.	0.%	-3795.	-4.%	2768.	3.%	-7.%	-7.%
1970	0.	11186.	0.	0.%	2888.	26.%	103.	1.%	25.%	25.%
1971	0.	2926.	0.	0.%	-2089.	-71.%	71.	2.%	-74.%	-74.%
1972	0.	11324.	0.	0.%	514.	5.%	348.	3.%	1.%	1.%
1973	0.	16756.	0.	0.%	1921.	11.%	255.	2.%	10.%	10.%
1974	0.	36359.	0.	0.%	5212.	14.%	1097.	3.%	11.%	11.%
1975	0.	16603.	0.	0.%	747.	4.%	162.	1.%	4.%	4.%
1976	0.	43932.	0.	0.%	2256.	5.%	63.	0.%	5.%	5.%
1977	0.	20375.	0.	0.%	848.	4.%	206.	1.%	3.%	3.%
1978	0.	29848.	0.	0.%	449.	2.%	947.	3.%	-2.%	-2.%
1979	0.	110455.	0.	0.%	38474.	35.%	1771.	2.%	33.%	33.%
1980	0.	-26283.	0.	0.%	379792.	-1445.%	-193.	1.%	-1446.%	-1446.%
1981	0.	62146.	0.	0.%	2204.	4.%	0.	0.%	4.%	4.%
1982	0.	114845.	0.	0.%	37.	0.%	-300.	0.%	0.%	0.%
1983	0.	56853.	0.	0.%	69.	0.%	-624.	-1.%	1.%	1.%
1984	0.	28929.	0.	0.%	1152.	4.%	624.	2.%	2.%	2.%
1985	0.	180319.	0.	0.%	1726.	1.%	-635.	0.%	1.%	1.%
1986	0.	61942.	0.	0.%	603.	1.%	3785.	6.%	-5.%	-5.%
1987	0.	65632.	0.	0.%	4797.	7.%	2604.	4.%	3.%	3.%
1988	0.	66486.	0.	0.%	1612.	2.%	0.	0.%	2.%	2.%
1989	0.	80142.	0.	0.%	51.	0.%	11628.	15.%	-14.%	-14.%
1990	0.	1063124.	0.	0.%	141149.	13.%	50399.	5.%	9.%	9.%
1991	0.	289538.	0.	0.%	21722.	8.%	99427.	34.%	-27.%	-27.%
1992	0.	704613.	0.	0.%	49167.	7.%	-3992.	-1.%	8.%	8.%
1993	0.	437544.	0.	0.%	2090.	0.%	114740.	26.%	-26.%	-26.%
1994	0.	347501.	0.	0.%	37443.	11.%	804.	0.%	11.%	11.%
1995	0.	104629.	0.	0.%	11107.	11.%	47957.	46.%	-35.%	-35.%

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KENTUCKY POWER COMPANY  
ACCOUNT NO.: 10872000  
GENERAL PLANT

7-15-2005

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIMB.	W/O REIMB.
1996	0.	451507.	0.	0.%	4006.	1.%	-70222.	-16.%	16.%	16.%
1997	0.	295506.	0.	0.%	68506.	23.%	27111.	9.%	14.%	14.%
1998	0.	1326363.	0.	0.%	0.	0.%	524.	0.%	0.%	0.%
1999	0.	26757.	0.	0.%	-9336.	-35.%	393.	1.%	-36.%	-36.%
2000	0.	224558.	0.	0.%	0.	0.%	-35438.	-16.%	16.%	16.%
2001	0.	27540.	0.	0.%	0.	0.%	8861.	32.%	-32.%	-32.%
2003	0.	1740509.	0.	0.%	-100160.	-6.%	146609.	8.%	-14.%	-14.%
2004	0.	12449685.	0.	0.%	1932476.	16.%	0.	0.%	16.%	16.%
	0.	21011618.	0.	0.%	2620451.	12.%	438181.	2.%	10.%	10.%
ROLLING BAND										
1954-1968	0.	434273.	0.	0.%	22813.	5.%	26328.	6.%	-1.%	-1.%
1955-1969	0.	524865.	0.	0.%	17086.	3.%	28239.	5.%	-2.%	-2.%
1956-1970	0.	531895.	0.	0.%	18821.	4.%	28046.	5.%	-2.%	-2.%
1957-1971	0.	523274.	0.	0.%	15557.	3.%	28061.	5.%	-2.%	-2.%
1958-1972	0.	517364.	0.	0.%	15330.	3.%	28148.	5.%	-2.%	-2.%
1959-1973	0.	518268.	0.	0.%	16620.	3.%	26961.	5.%	-2.%	-2.%
1960-1974	0.	546666.	0.	0.%	21517.	4.%	27820.	5.%	-1.%	-1.%
1961-1975	0.	527294.	0.	0.%	19093.	4.%	25789.	5.%	-1.%	-1.%
1962-1976	0.	539007.	0.	0.%	19935.	4.%	24903.	5.%	-1.%	-1.%
1963-1977	0.	553579.	0.	0.%	17289.	3.%	23502.	4.%	-1.%	-1.%
1964-1978	0.	554114.	0.	0.%	15269.	3.%	21116.	4.%	-1.%	-1.%
1965-1979	0.	598461.	0.	0.%	53173.	9.%	18666.	3.%	6.%	6.%
1966-1980	0.	409731.	0.	0.%	432077.	105.%	15382.	4.%	102.%	102.%
1967-1981	0.	469426.	0.	0.%	433939.	92.%	5799.	1.%	91.%	91.%
1968-1982	0.	572118.	0.	0.%	430739.	75.%	7921.	1.%	74.%	74.%
1969-1983	0.	604521.	0.	0.%	429527.	71.%	6674.	1.%	70.%	70.%
1970-1984	0.	536254.	0.	0.%	434474.	81.%	4530.	1.%	80.%	80.%
1971-1985	0.	705387.	0.	0.%	433312.	61.%	3792.	1.%	61.%	61.%
1972-1986	0.	764403.	0.	0.%	436004.	57.%	7506.	1.%	56.%	56.%
1973-1987	0.	818711.	0.	0.%	440287.	54.%	9762.	1.%	53.%	53.%
1974-1988	0.	868441.	0.	0.%	439978.	51.%	9507.	1.%	50.%	50.%
1975-1989	0.	912224.	0.	0.%	434817.	48.%	20038.	2.%	45.%	45.%
1976-1990	0.	1958745.	0.	0.%	575219.	29.%	70275.	4.%	26.%	26.%
1977-1991	0.	2204351.	0.	0.%	594685.	27.%	169639.	8.%	19.%	19.%
1978-1992	0.	2888589.	0.	0.%	643004.	22.%	165441.	6.%	17.%	17.%
1979-1993	0.	3296285.	0.	0.%	644645.	20.%	279234.	8.%	11.%	11.%
1980-1994	0.	3533331.	0.	0.%	643614.	18.%	278267.	8.%	10.%	10.%
1981-1995	0.	3664243.	0.	0.%	274929.	8.%	326417.	9.%	-1.%	-1.%

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DELOITTE HASKINS & SELLS

DEPRECIATION SYSTEM - DSALVG01 RELEASE 5.0

STUDY AS OF DECEMBER 31, 2004

PAGE 3

KENTUCKY POWER COMPANY

7-15-2005

ACCOUNT NO.: 10872000

GENERAL PLANT

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIMB.	W/O REIMB.
1982-1996	0.	4053604.	0.	0.%	276731.	7.%	256195.	6.%	1.%	1.%
1983-1997	0.	4234265.	0.	0.%	345200.	8.%	283606.	7.%	1.%	1.%
1984-1998	0.	5503775.	0.	0.%	345131.	6.%	284754.	5.%	1.%	1.%
1985-1999	0.	5501603.	0.	0.%	334643.	6.%	284523.	5.%	1.%	1.%
1986-2000	0.	5545842.	0.	0.%	332917.	6.%	249720.	5.%	2.%	2.%
1987-2001	0.	5511440.	0.	0.%	332314.	6.%	254796.	5.%	1.%	1.%
1988-2002	0.	5445808.	0.	0.%	327517.	6.%	252192.	5.%	1.%	1.%
1989-2003	0.	7119831.	0.	0.%	225745.	3.%	398801.	6.%	-2.%	-2.%
1990-2004	0.	19489374.	0.	0.%	2158170.	11.%	387173.	2.%	9.%	9.%

**Exhibit \_\_\_\_ (MJM-6)**

**Excessive Depreciation**

### Excessive Depreciation

An excessive depreciation rate is one that produces depreciation expense which is more than necessary to return a company's capital investment over the life of the asset. The concept of excessive depreciation is not new, and in fact was explained by the U.S. Supreme Court in a landmark 1934 decision, Lindheimer v. Illinois Bell Telephone Company, as follows:

If the predictions of service life were entirely accurate and retirements were made when and as these predictions were precisely fulfilled, the depreciation reserve would represent the consumption of capital, on a cost basis, according to the method which spreads that loss over the respective service periods. But if the amounts charged to operating expenses and credited to the account for depreciation reserve are excessive, to that extent subscribers for the telephone service are required to provide, in effect, capital contributions, not to make good losses incurred by the utility in the service rendered and thus to keep its investment unimpaired, but to secure additional plant and equipment upon which the utility expects a return.

Confiscation being the issue, the company has the burden of making a convincing showing that the amounts it has charged to operating expenses for depreciation have not been excessive. That burden is not sustained by proof that its general accounting system has been correct. The calculations are mathematical, but the predictions underlying them are essentially matters of opinion. They proceed from studies

of the "behavior of large groups" of items. These studies are beset with a host of perplexing problems. Their determination involves the examination of many variable elements and opportunities for excessive allowances, even under a correct system of accounting, are always present. The necessity of checking the results is not questioned. The predictions must meet the controlling test of experience.<sup>1</sup>

Excessive depreciation rates produce excessive depreciation expense. In other words, if an excessive depreciation rate is applied to the plant balance, it results in excessive depreciation expense. Since depreciation expense flows dollar-for-dollar into the revenue requirement, excessive depreciation expense results in an excessive revenue requirement.

Excessive depreciation also flows dollar-for-dollar into the accumulated depreciation reserve account. This can result in a depreciation reserve actually exceeding the gross plant balance. That is because the depreciation rate is excessive; it is more than necessary to fully depreciate the plant. This is what the Court was talking about in *Lindheimer*. Therefore, at the end of its life, this results in an accumulated depreciation account which *exceeds* the original cost in the plant account.

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<sup>1</sup> *Lindheimer v. Illinois Bell Telephone Company*, 292 U.S. 151, 168-170, 54 S.Ct. 658, 665-666 (1934). (Emphasis added; footnote deleted.)

The public accounting profession, through the Financial Accounting Standards Board ("FASB") has also addressed accumulated reserve excesses in its SFAS No. 143.<sup>2</sup> Paragraph B22 says the following:

B22. Paragraph 37 of Statement 19 states that "estimated dismantlement, restoration, and abandonment costs...shall be taken into account in determining amortization and depreciation rates." Application of that paragraph has the effect of accruing an expense irrespective of the requirements for liability recognition in the FASB Concepts Statements. In doing so, it results in recognition of accumulated depreciation that can exceed the historical cost of a long-lived asset. The Board concluded that an entity should be precluded from including an amount for an asset retirement obligation in the depreciable base of a long-lived asset unless that amount also meets the recognition criteria in this Statement. When an entity recognizes a liability for an asset retirement obligation, it also will recognize an increase in the carrying amount of the related long-lived asset. Consequently, depreciation of that asset will not result in the recognition of accumulated depreciation in excess of the historical cost of a long-lived asset.<sup>3</sup>

As one can see from the above, as recently as 2002, the public accounting profession does not approve of depreciating an asset beyond its original cost. It actually used the word "excess," and it is obvious that it frowns upon accumulated depreciation balances that exceed the original cost of plant.

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<sup>2</sup> Statement of Financial Accounting Standards No. 143 ("SFAS No. 143") – Accounting for Asset Retirement Obligations.

<sup>3</sup> SFAS No. 143, paragraph B22 (emphasis added).

GAAP does not control ratemaking, but the rationale described above is both informative and makes sense.

Ultimately, ratepayers pay for excessive depreciation rates. As the U.S. Supreme Court said, the result is the extraction of capital contributions from ratepayers, which the Court decided was inappropriate. Current GAAP accounting rules highlight these amounts associated with negative net salvage and require that they be reported as Regulatory Liabilities ("amounts owed") to ratepayers.

Exhibit \_\_\_\_ (MJM-7)

**Public Utility  
Depreciation Concepts  
Regulatory Perspective**

## Depreciation Concepts

### Public Utility Depreciation

From a regulator's perspective, the objective of public utility depreciation is straight-line capital recovery. This is accomplished by allocating the original cost of assets to expense over the lives of those assets through the application of depreciation rates to plant balances.

There are several unique factors driving public utility depreciation rates. First, public utility depreciation is based on a "group life" as opposed to the lives of individual assets. Second, the cost of removing or disposing of an asset that is retired from service is charged to the accumulated depreciation reserve, as opposed to being recognized as an operating expense in the year incurred. Third, the original cost of a retired asset is also recorded in the accumulated depreciation reserve, as opposed to being written off in the year of the asset's retirement/disposal. Fourth, in certain jurisdictions public utility depreciation rates incorporate net salvage factors as discussed above. This is not the case for unregulated entities. Each of these factors affects the depreciation rates that are ultimately determined for the group of assets that are recorded in plant accounts designated by the FERC Uniform System of Accounts ("USOA").

Depreciation expense is one of the primary cost drivers of public utility revenue requirement calculations because these companies are capital intensive. An excessive depreciation rate can unreasonably increase the utility's

revenue requirement and resulting service rates; thereby unnecessarily charging millions of dollars to a utility's customers.

Depreciation is a legitimate expense, but it is a major expense based on a substantial amount of judgment and complex analytical procedures, and it drives utility prices. Therefore, the measurement of depreciation and the calculation of the expense warrant careful regulatory consideration and scrutiny.

I discuss the fundamentals of public utility depreciation below, including the difference between the whole-life and remaining life techniques and the impact of life and net salvage estimation on depreciation rates.

#### **Plant Additions, Retirements and Balances**

Public utilities record their plant investment activity in the individual plant accounts set-forth in the Federal Energy Regulatory Commission's ("FERC") Uniform System of Accounts ("USOA"). Additions, retirements and balances refer to individual plant accounts. For example, account 362-Station Equipment, is a plant account. An annual addition is the original cost of plant added to the account during the year. An annual retirement is the original cost of a prior addition which is now removed from service. The plant balance is what is left.

#### **Depreciation Expense**

Depreciation expense is a charge to operating expense to reflect the recovery of the cost of an asset. Public utility depreciation expense is typically straight-line over service life, which results in an equal share of the cost of assets being assigned or allocated to expense each year over the service life of the assets. A service life is the period of time during which depreciable plant [and

equipment] is in service.<sup>1</sup> Annual depreciation expense is a cost included in a public utility's revenue requirement.

Annual depreciation expense is calculated by applying a depreciation rate to plant balances. The resulting expense (also called accrual) is charged, just as any other expense, to the revenue requirement and from there it is charged to the utility's customers.

Depreciation is a non-cash expense in contrast to payroll expense, for example, which involves the current outlay of cash. That is, depreciation expense does not involve a specific payment during the current or test-year. Both depreciation and payroll are included as expenses in the income statement and revenue requirement, but no cash flows out of the company for depreciation expense. Instead of reducing the cash account, depreciation expense is recorded on the income statement as an expense and simultaneously recorded on the balance sheet in the accumulated depreciation account; which is shown as an offset to plant in service.

Accumulated depreciation (hereinafter called reserve or accumulated depreciation) is, in essence, a record of the previously recorded depreciation expense. At any point in time, the accumulated depreciation account represents the net accumulated amount of the original cost of assets and net salvage that has been recovered to date. It can be considered a measure of the depreciation recovered from ratepayers.

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<sup>1</sup> Public Utility Depreciation Practices, August, 1996. National Association of Regulatory Utility Commissioners ("NARUC Manual"), p. 321.

## Depreciation Rates

Depreciation rates such as Kentucky Power's are founded upon three fundamental parameters: a service life, a dispersion pattern and a net salvage ratio. Kentucky Power has used the remaining life technique to compute its rates. In order to understand remaining life depreciation, it is useful to first address whole-life depreciation.

## Whole-Life Technique

The following calculation shows a straight-line whole-life depreciation rate assuming a 10-year average service life. This example does not include net salvage.

### Table 1

#### **Straight-Line Whole-Life Depreciation Rate Assuming 10-Year Life**

$$\frac{100\%}{10 \text{ yrs.}} = 10.0\%$$

Each year the 10.0 percent depreciation rate would be applied to plant in service to produce an annual depreciation expense. All things equal, at the end of 10 years, the plant balance will be 100%, and the depreciation reserve balance will be 100%. This equality is important to an understanding of certain issues in this case.

Kentucky Power includes net salvage in the depreciation rate calculation. A central issue in this case is negative net salvage. I will, therefore, use negative net salvage in my example. Negative net salvage is the net cost of removal of the asset after completion of its service life. For the remainder of this discussion

I use the terms negative net salvage, decommissioning and cost of removal interchangeably. Assuming a negative 5 percent (-5%) net salvage ratio, the equation above with a value for negative net salvage is as follows:

**Table 2**

**Straight-Line Whole-Life Depreciation Rate  
Assuming 10-Year Life and -5% Net Salvage**

$$\frac{100\% - (-5\%)}{10 \text{ yrs.}} = 10.5\%$$

Negative net salvage increases the resulting whole-life depreciation rate from 10.0% to 10.5%. This happens because negative salvage is, in effect, added to the original cost of the plant. Instead of 100% (which represents the original cost of assets), the numerator becomes 105%. This is equivalent to capitalizing or adding the estimated cost of removal to the original cost of the asset.

At the end of life under this scenario the plant balance will be 100% but the reserve will be 105%. In other words, unlike the “zero net salvage scenario” in Table 1; when negative net salvage is included in a depreciation rate there will not be an equality of plant and reserve at the end of an asset’s life because the Company will have charged more depreciation than it paid for the original cost of the asset.

Under these circumstances, equality will only be achieved if the Company actually spends the additional money at the end of the asset’s life. However, unless the Company has a legal liability to remove the asset, it is not required to spend the money. Furthermore, since accumulated depreciation is an “unfunded account”, even though the Company collected unnecessary cost of

removal amounts in the past, it will have already spent that money on whatever it chose: salaries, dividends, etc.

### Remaining Life Technique

The remaining life technique is similar to the whole-life technique, but it incorporates accumulated depreciation into the numerator of the equation, and the denominator becomes the remaining life rather than the whole life of the asset.

If the hypothetical 10-year asset discussed above is 3 years old, its remaining life would be 7 years ( $10 - 3 = 7$ ). The accumulated depreciation account would be 31.5 percent of the original cost because the 10.5 percent depreciation rate from Table 2 would have been applied for three years ( $3 \times 10.5\% = 31.5\%$ ). The remaining life depreciation rate would then be calculated as follows:

**Table 3**

**Straight-Line Remaining Depreciation Life Rate  
Assuming 10-year Life, 7-year Remaining Life  
And -5% Net Salvage**

$$\frac{100\% - (-5\%) - 31.5\%}{7 \text{ years}} = 10.5\%$$

In the examples shown in Tables 2 and 3, the remaining life depreciation rate and the whole-life depreciation rates are the same (10.5 percent), because I have assumed that the accumulated depreciation account is in balance. In other words, based on a continuation of the fundamental parameters, i.e., the 10-year

service life and the negative 5 percent net salvage ratio, exactly the right amount of depreciation (31.5 percent) has been charged and collected in the past,

If either the service life or net salvage parameter changes during the life of the plant, the accumulated depreciation account will be out of balance, and the remaining life rate will be either higher or lower than whole-life rate depending on the direction of the imbalance. That is because the Company will have collected either too much depreciation or not enough depreciation in the past, given the current estimates of lives or future net salvage.

The difference between the actual amount recovered, as included in the book depreciation reserve, and a theoretical estimate of what should be in the book reserve, is called a “reserve imbalance.” The remaining life technique is often used to deal with such reserve imbalances.

The remaining life technique has been accepted and used in many jurisdictions. Its primary failing is that if there is a reserve imbalance, positive or negative, it results in the application of an incorrect rate to new plant additions. In other words, the remaining life technique perpetuates the same imbalances it attempts to cure. This problem can be resolved by using whole-life rates and separate treatment for any reserve imbalances.

### **Impact of Life and Net Salvage Estimation**

Utilities own thousands of assets, represented by millions of dollars of investment. Given the capital intensity of the industry, it is very difficult to track and depreciate every single asset that a utility owns. Public utility depreciation is,

therefore, based on a group concept, which relies on averages of the service lives and remaining lives of the assets within a specific group.

These factors are necessarily estimates of the average service lives and average remaining lives of groups of assets. These estimates are in turn based on complex analytical procedures which involve not only the age of existing and retired assets, but also retirement dispersion patterns called "lowa curves." The important point to remember is that service life, average age and lowa curves are all used in the estimation of an average service life and average remaining life of a group of assets and are ultimately used to calculate the depreciation rate for that group of assets.

In depreciation analysis it is axiomatic that the shorter the life, the higher the resulting depreciation rate. If the depreciation rates are based on lives which are too short, the depreciation rates will be too high. What if the 10-year life I used in the earlier examples really should have been 30 years? For example, assume that the analyst conducted statistical analyses which indicated that the average life is actually 30 years. The following table shows the impact of continuing to use a shorter life.

**Table 4**

**Impact of Reducing a Life From 30 Years to 10 Years**

$$30 \text{ year life} = 100\%/30 = 3.3\%$$

$$10 \text{ year life} = 100\%/10 = 10.0\%$$

If the life should have been 30 years, the rate should have been 3.3 percent rather than the 10 percent depreciation rate based on a 10 year life. The

shorter the life, the higher the rate. If the life is too short, the resulting rate is obviously excessive.

The estimation of future net salvage also has an impact on depreciation rates. Several of Kentucky Power's proposed depreciation rates contain negative net salvage factors which charge too much for future cost of removal because they are too negative. They result in excessive depreciation rates. The next table shows the impact on depreciation rates of increasing the cost of removal ratio.

**Table 5**

**Impact of Increasing Cost of Removal Ratio**

$$\text{-5\% ratio} = 100 \% - (-5)/30 = 3.5 \%$$

$$\text{-50\% ratio} = 100 \% - (-50)/30 = 5.0 \%$$

Increasing a cost of removal ratio from -5% to -50% increases the depreciation rate from 3.5% to 5.0%. If the estimated -50% cost of removal ratio is not supportable, obviously, the resulting 5.0% depreciation rate is excessive. The combination of these two factors, i.e., understated lives and overstated cost of removal ratios, compounds the excessive depreciation rate problem.

**Exhibit \_\_\_ (MJM-8)**

**Response to AG-1-168**

**Regulatory Liability**

KPSC Case No. 2005-00341  
AG 1<sup>st</sup> Set Data Requests  
Dated November 9, 2005  
Item No. 168  
Page 1 of 2

## Kentucky Power Company

### REQUEST

With respect to the Regulatory Liability relating to asset cost of removal which you reclassified out of accumulated depreciation:

- a. Do you agree that this constitutes a regulatory liability for regulatory purposes in Kentucky and for FERC purposes? If not, please explain why not.
- b. Do you agree that this amount is a refundable obligation to ratepayers until it is spent on its intended purpose (cost of removal)? If not, why not?
- c. Please explain the repayment provisions associated with this regulatory liability.
- d. Explain when you expect to spend this money for cost of removal.
- e. Explain what you have done with this money as you have collected it. Please provide all evidence in support of expenditures if the response is that the collected money has been spent on plant additions as it has been collected.
- f. Identify and explain all other similar examples of Kentucky Power's advance collections of estimated future costs for which it does not have a legal obligation.
- g. Does Kentucky Power agree that the Kentucky Public Service Commission will never know whether or not Kentucky Power will actually spend all of this money for cost of removal until and if Kentucky Power goes out of business? If not, why not?
- h. Does Kentucky Power believe that amounts recorded in accumulated depreciation represent capital recovery? If not, why not?
- i. Whose capital is reflected in accumulated depreciation – shareholders' or ratepayers'?

KPSC Case No. 2005-00341  
AG 1<sup>st</sup> Set Data Requests  
Dated November 9, 2005  
Item No. 168  
Page 2 of 2

RESPONSE

- a. For financial reporting purposes, the Company believes that these amounts are properly classified as a regulatory liability for SEC reporting purposes and should remain classified in Account 108, Accumulated Depreciation for FERC and Kentucky regulatory reporting purposes in accordance with FERC Order 631.
- b. No. The Company does not believe the approved collection of removal costs through depreciation rates creates a refundable obligation. The definition of depreciation provides that net salvage is to be considered in depreciation.
- c. The Company does not believe there is a repayment provision.
- d. The money is spent on an ongoing basis as plant is retired.
- e. The money has been spent as part of the ongoing operations of all aspects of the business.
- f. The Company has not performed an analysis to identify the data requested.
- g. The Company believes that the Kentucky Public Service Commission will be able to monitor the removal costs on an ongoing basis as a part of monitoring the accumulated provision for depreciation. The Company would agree that the amount of total removal costs cannot be determined until all property is retired.
- h. Yes.
- i. The shareholder's.

WITNESS James E. Henderson

**Exhibit \_\_\_\_ (MJM-9)**

**Responses to Assorted Discovery Requests**

**Big Sandy Unit 1**

KPSC Case No. 2005-00341  
AG 1<sup>st</sup> Set Data Requests  
Dated November 9, 2005  
Item No. 141  
Page 1 of 1

## Kentucky Power Company

### REQUEST

Provide all internal life extension studies prepared by the Company. Life extension refers to any program, maintenance or capital, designed to extend lives and/or increase capacity of its existing plant-in-service. Identify the functions to which these studies relate.

### RESPONSE

Neither Kentucky Power nor the AEP Service Corp has undertaken any unit life extension studies involving Big Sandy U1, Big Sandy U2 or Rockport. Expected operating life extends to 60 years or more based on the economic operation of the individual units. Individual component repair or replacement projects are considered on an as needed basis.

WITNESS Errol K. Wagner

KPSC Case No. 2005-00341  
AG 1<sup>st</sup> Set Data Requests  
Dated November 9, 2005  
Item No. 173  
Page 1 of 1

## Kentucky Power Company

### REQUEST

Workpaper page 2 of 443.

- a. Explain and provide documentation of the 'environmental constraints' relating to Big Sandy Unit 1.
- b. Identify and explain the guarantees that the company is providing to the Kentucky Commission that it will actually spend the \$32 million demolition cost for Big Sandy, and when it will spend the money.
- c. Identify all alternatives to the conceptual demolition cost that were studied and explain why they were rejected.

### RESPONSE

- a. The expectation is that federal environmental regulations may not permit the continued operation of Big Sandy Unit 1 without the addition of FGD equipment.
- b. The Company is not aware of any guarantees required by the Kentucky Commission.
- c. No alternatives were studied.

WITNESS James E. Henderson

KPSC Case No. 2005-00341  
 Attorney General Second Set Data Request  
 Order Dated December 12, 2005  
 Item No. 48  
 Page 1 of 1

**Kentucky Power Company**

**REQUEST**

Refer to AG Request No. 161. Please provide all documents and correspondence related to the review of FIN 47 as they currently exist.

**RESPONSE**

The only potential Asset Retirement Obligations the Company has identified in connection with the review of FIN 47 is for asbestos removal and abatement at Big Sandy Generating Plant. The preliminary cost estimates, in 2005 dollars, for the asbestos removal and abatement is as follows:

Business Unit	Plant	Unit	Size	Fuel	In Service Date	O/S Date	Percent Asbestos	Cubic Yard	Dollars for Removal & Disposal
KPCo	Big Sandy	BS-1	260 MW	Coal	1963	2030	60	1054.56	\$1,265,472
KPCo	Big Sandy	BS-2	800 MW	Coal	1969	2036	25	1352.0	\$1,622,400

The removal dates will not correspond to the plant retirement dates (2015-2034) shown in the depreciation study. That is because it is not expected that asbestos removal would begin until some time after the plant is retired.

**WITNESS:** James E Henderson

KPSC Case No. 2005-00341  
KIUC First Set Data Request  
Dated November 10, 2005  
Item No. 62  
Page 1 of 1

**Kentucky Power Company**

**REQUEST**

Refer to Schedule 1 of the depreciation study included as Exhibit JEH-1 to Mr. Henderson's Testimony. Please confirm that the Company actually plans to retire Big Sandy 1 in 2015. Provide all support relied on for this assumption. If the Company does not actually plan to retire Big Sandy 1 in 2015, then please provide the Company's present projection of the retirement year and provide all support relied on for that assumption.

**RESPONSE**

2015 is the planed retirement date for Big Sandy Unit 1. Please refer to Page 2 of 443 of the depreciation study workpapers.

**WITNESS:** James E Henderson

KPSC Case No. 2005-00341  
KIUC First Set Data Request  
Dated November 10, 2005  
Item No. 63  
Page 1 of 1

## Kentucky Power Company

### REQUEST

Please identify all federal and/or state requirements that will require the Company to retire Big Sandy 1 in 2015, if any. If there are no legal mandates to retire Big Sandy 1 in 2015, then please so state.

### RESPONSE

The Company is not aware of any current legal mandates to retire Big Sandy 1 in 2015.

WITNESS: James E Henderson

KPSC Case No. 2005-00341  
KIUC's Second Set Data Request  
Order Date December 12, 2005  
Item No. 1  
Page 1 of 1

**Kentucky Power Company**

**REQUEST**

Please provide a copy of all studies, analyses, correspondence, and all other documents that address the retirement of Big Sandy 1.

**RESPONSE**

The Company is unaware of any specific studies, analyses, correspondence or other documents that specifically address the retirement of Big Sandy Unit 1.

**WITNESS - James E. Henderson**

KPSC Case No. 2005-00341  
KIUC's Second Set Data Request  
Order Date December 12, 2005  
Item No. 4  
Page 1 of 1

**Kentucky Power Company**

**REQUEST**

Please provide a copy of all studies, analyses, correspondence, and all other documents that address the replacement of the Big Sandy 1 capacity in 2015. If there are no responsive documents, then please explain why not.

**RESPONSE**

At this time, there are no analyses or other documents addressing the replacement of Big Sandy 1 capacity in 2015. There has not been a prior need to perform this type of analysis.

**WITNESS – James Henderson**

## Experience

### **Snavely King Majoros O'Connor & Lee, Inc.**

*Vice President and Treasurer (1988 to Present)*  
*Senior Consultant (1981-1987)*

Mr. Majoros provides consultation specializing in accounting, financial, and management issues. He has testified as an expert witness or negotiated on behalf of clients in more than one hundred thirty regulatory federal and state regulatory proceedings involving telephone, electric, gas, water, and sewerage companies. His testimony has encompassed a wide array of complex issues including taxation, divestiture accounting, revenue requirements, rate base, nuclear decommissioning, plant lives, and capital recovery. Mr. Majoros has been responsible for developing the firm's consulting services on depreciation and other capital recovery issues into a major area of practice. In addition to traditional regulatory engagements, Mr. Majoros has also provided consultation to the U.S. Department of Justice. His expertise has been called upon to address the accounting and plant life effects of electric plant modifications in environmental proceedings and lawsuits, and to estimate economic damages suffered by black farmers in discrimination suits.

### **Van Scoyoc & Wiskup, Inc., Consultant (1978-1981)**

Mr. Majoros conducted and assisted in various management and regulatory consulting projects in the public utility field, including preparation of electric system load projections for a group of municipally and cooperatively owned electric systems; preparation of a system of accounts and reporting of gas and oil pipelines to be used by a state regulatory commission; accounting system analysis and design for rate proceedings involving electric, gas, and telephone utilities. Mr. Majoros provided onsite management accounting and controllership assistance to a municipal electric and water utility. Mr. Majoros also assisted in an antitrust proceeding involving a major electric utility. He submitted expert testimony in FERC Docket No. RP79-12 (El Paso Natural Gas Company), and he co-authored a study entitled Analysis of Staff Study on Comprehensive Tax Normalization that was submitted to FERC in Docket No. RM 80-42.

### **Handling Equipment Sales Company, Inc.** *Controller/Treasurer (1976-1978)*

Mr. Majoros' responsibilities included financial management, general accounting and reporting, and income taxes.

### **Ernst & Ernst, Auditor (1973-1976)**

Mr. Majoros was a member of the audit staff where his responsibilities included auditing, supervision, business systems analysis, report preparation, and corporate income taxes.

### **University of Baltimore - (1971-1973)**

Mr. Majoros was a full-time student in the School of Business.

During this period Mr. Majoros worked consistently on a part-time basis in the following positions: Assistant Legislative Auditor – State of Maryland, Staff Accountant – Robert M. Carney & Co., CPA's, Staff Accountant – Naron & Wegad, CPA's, Credit Clerk – Montgomery Wards.

### **Central Savings Bank, (1969-1971)**

Mr. Majoros was an Assistant Branch Manager at the time he left the bank to attend college as a full-time student. During his tenure at the bank, Mr. Majoros gained experience in each department of the bank. In addition, he attended night school at the University of Baltimore.

## Education

University of Baltimore, School of Business, B.S. –  
Concentration in Accounting

## Professional Affiliations

American Institute of Certified Public Accountants  
Maryland Association of C.P.A.s  
Society of Depreciation Professionals

## Publications, Papers, and Panels

*"Analysis of Staff Study on Comprehensive Tax Normalization," FERC Docket No. RM 80-42, 1980.*

*"Telephone Company Deferred Taxes and Investment Tax Credits – A Capital Loss for Ratepayers," Public Utility Fortnightly, September 27, 1984.*

*"The Use of Customer Discount Rates in Revenue Requirement Comparisons," Proceedings of the 25th Annual Iowa State Regulatory Conference, 1986*

*"The Regulatory Dilemma Created By Emerging Revenue Streams of Independent Telephone Companies," Proceedings of NARUC 101st Annual Convention and Regulatory Symposium, 1989.*

*"BOC Depreciation Issues in the States," National Association of State Utility Consumer Advocates, 1990 Mid-Year Meeting, 1990.*

*"Current Issues in Capital Recovery" 30<sup>th</sup> Annual Iowa State Regulatory Conference, 1991.*

*"Impaired Assets Under SFAS No. 121," National Association of State Utility consumer Advocates, 1996 Mid-Year Meeting, 1996.*

*"What's 'Sunk' Ain't Stranded: Why Excessive Utility Depreciation is Avoidable," with James Campbell, Public Utilities Fortnightly, April 1, 1999.*

*"Local Exchange Carrier Depreciation Reserve Percents," with Richard B. Lee, Journal of the Society of Depreciation Professionals, Volume 10, Number 1, 2000-2001*

*"Rolling Over Ratepayers," Public Utilities Fortnightly, Volume 143, Number 11, November, 2005.*

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Federal Regulatory Agencies

Date	Agency	Docket	Utility
1979	FERC-US 19/	RP79-12	El Paso Natural Gas Co.
1980	FERC-US 19/	RM80-42	Generic Tax Normalization
1996	CRTC-Canada 30/	97-9	All Canadian Telecoms
1997	CRTC-Canada 31/	97-11	All Canadian Telecoms
1999	FCC 32/	98-137 (Ex Parte)	All LECs
1999	FCC 32/	98-91 (Ex Parte)	All LECs
1999	FCC 32/	98-177 (Ex Parte)	All LECs
1999	FCC 32/	98-45 (Ex Parte)	All LECs
2000	EPA 35/	CAA-00-6	Tennessee Valley Authority
2003	FERC 48/	RM02-7	All Utilities
2003	FCC 52/	03-173	All LECs
2003	FERC	ER03-409-000, ER03-666-000	Pacific Gas and Electric Co.
2005	US District Court, Northern District of AL, Northwestern Division 55/56/57/	CV 01-B-403-NW	Tennessee Valley Authority

State Regulatory Agencies

1982	Massachusetts 17/	DPU 557/558	Western Mass Elec. Co.
1982	Illinois 16/	ICC81-8115	Illinois Bell Telephone Co.
1983	Maryland 8/	7574-Direct	Baltimore Gas & Electric Co.
1983	Maryland 8/	7574-Surrebuttal	Baltimore Gas & Electric Co.
1983	Connecticut 15/	810911	Woodlake Water Co.
1983	New Jersey 1/	815-458	New Jersey Bell Tel. Co.
1983	New Jersey 14/	8011-827	Atlantic City Sewerage Co.
1984	Dist. Of Columbia 7/	785	Potomac Electric Power Co.
1984	Maryland 8/	7689	Washington Gas Light Co.
1984	Dist. Of Columbia 7/	798	C&P Tel. Co.
1984	Pennsylvania 13/	R-832316	Bell Telephone Co. of PA
1984	New Mexico 12/	1032	Mt. States Tel. & Telegraph
1984	Idaho 18/	U-1000-70	Mt. States Tel. & Telegraph
1984	Colorado 11/	1655	Mt. States Tel. & Telegraph
1984	Dist. Of Columbia 7/	813	Potomac Electric Power Co.
1984	Pennsylvania 3/	R842621-R842625	Western Pa. Water Co.
1985	Maryland 8/	7743	Potomac Edison Co.
1985	New Jersey 1/	848-856	New Jersey Bell Tel. Co.
1985	Maryland 8/	7851	C&P Tel. Co.
1985	California 10/	I-85-03-78	Pacific Bell Telephone Co.
1985	Pennsylvania 3/	R-850174	Phila. Suburban Water Co.

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1985	Pennsylvania <u>3/</u>	R850178	Pennsylvania Gas & Water Co.
1985	Pennsylvania <u>3/</u>	R-850299	General Tel. Co. of PA
1986	Maryland <u>8/</u>	7899	Delmarva Power & Light Co.
1986	Maryland <u>8/</u>	7754	Chesapeake Utilities Corp.
1986	Pennsylvania <u>3/</u>	R-850268	York Water Co.
1986	Maryland <u>8/</u>	7953	Southern Md. Electric Corp.
1986	Idaho <u>9/</u>	U-1002-59	General Tel. Of the Northwest
1986	Maryland <u>8/</u>	7973	Baltimore Gas & Electric Co.
1987	Pennsylvania <u>3/</u>	R-860350	Dauphin Cons. Water Supply
1987	Pennsylvania <u>3/</u>	C-860923	Bell Telephone Co. of PA
1987	Iowa <u>6/</u>	DPU-86-2	Northwestern Bell Tel. Co.
1987	Dist. Of Columbia <u>7/</u>	842	Washington Gas Light Co.
1988	Florida <u>4/</u>	880069-TL	Southern Bell Telephone
1988	Iowa <u>6/</u>	RPU-87-3	Iowa Public Service Company
1988	Iowa <u>6/</u>	RPU-87-6	Northwestern Bell Tel. Co.
1988	Dist. Of Columbia <u>7/</u>	869	Potomac Electric Power Co.
1989	Iowa <u>6/</u>	RPU-88-6	Northwestern Bell Tel. Co.
1990	New Jersey <u>1/</u>	1487-88	Morris City Transfer Station
1990	New Jersey <u>5/</u>	WR 88-80967	Toms River Water Company
1990	Florida <u>4/</u>	890256-TL	Southern Bell Company
1990	New Jersey <u>1/</u>	ER89110912J	Jersey Central Power & Light
1990	New Jersey <u>1/</u>	WR90050497J	Elizabethtown Water Co.
1991	Pennsylvania <u>3/</u>	P900465	United Tel. Co. of Pa.
1991	West Virginia <u>2/</u>	90-564-T-D	C&P Telephone Co.
1991	New Jersey <u>1/</u>	90080792J	Hackensack Water Co.
1991	New Jersey <u>1/</u>	WR90080884J	Middlesex Water Co.
1991	Pennsylvania <u>3/</u>	R-911892	Phil. Suburban Water Co.
1991	Kansas <u>20/</u>	176, 716-U	Kansas Power & Light Co.
1991	Indiana <u>29/</u>	39017	Indiana Bell Telephone
1991	Nevada <u>21/</u>	91-5054	Central Tele. Co. – Nevada
1992	New Jersey <u>1/</u>	EE91081428	Public Service Electric & Gas
1992	Maryland <u>8/</u>	8462	C&P Telephone Co.
1992	West Virginia <u>2/</u>	91-1037-E-D	Appalachian Power Co.
1993	Maryland <u>8/</u>	8464	Potomac Electric Power Co.
1993	South Carolina <u>22/</u>	92-227-C	Southern Bell Telephone
1993	Maryland <u>8/</u>	8485	Baltimore Gas & Electric Co.
1993	Georgia <u>23/</u>	4451-U	Atlanta Gas Light Co.
1993	New Jersey <u>1/</u>	GR93040114	New Jersey Natural Gas. Co.
1994	Iowa <u>6/</u>	RPU-93-9	U.S. West – Iowa
1994	Iowa <u>6/</u>	RPU-94-3	Midwest Gas
1995	Delaware <u>24/</u>	94-149	Wilm. Suburban Water Corp.
1995	Connecticut <u>25/</u>	94-10-03	So. New England Telephone
1995	Connecticut <u>25/</u>	95-03-01	So. New England Telephone
1995	Pennsylvania <u>3/</u>	R-00953300	Citizens Utilities Company
1995	Georgia <u>23/</u>	5503-0	Southern Bell

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1996	Maryland 8/	8715	Bell Atlantic
1996	Arizona 26/	E-1032-95-417	Citizens Utilities Company
1996	New Hampshire 27/	DE 96-252	New England Telephone
1997	Iowa 6/	DPU-96-1	U S West – Iowa
1997	Ohio 28/	96-922-TP-UNC	Ameritech – Ohio
1997	Michigan 28/	U-11280	Ameritech – Michigan
1997	Michigan 28/	U-112 81	GTE North
1997	Wyoming 27/	7000-ztr-96-323	US West – Wyoming
1997	Iowa 6/	RPU-96-9	US West – Iowa
1997	Illinois 28/	96-0486-0569	Ameritech – Illinois
1997	Indiana 28/	40611	Ameritech – Indiana
1997	Indiana 27/	40734	GTE North
1997	Utah 27/	97-049-08	US West – Utah
1997	Georgia 28/	7061-U	BellSouth – Georgia
1997	Connecticut 25/	96-04-07	So. New England Telephone
1998	Florida 28/	960833-TP et. al.	BellSouth – Florida
1998	Illinois 27/	97-0355	GTE North/South
1998	Michigan 33/	U-11726	Detroit Edison
1999	Maryland 8/	8794	Baltimore Gas & Electric Co.
1999	Maryland 8/	8795	Delmarva Power & Light Co.
1999	Maryland 8/	8797	Potomac Edison Company
1999	West Virginia 2/	98-0452-E-GI	Electric Restructuring
1999	Delaware 24/	98-98	United Water Company
1999	Pennsylvania 3/	R-00994638	Pennsylvania American Water
1999	West Virginia 2/	98-0985-W-D	West Virginia American Water
1999	Michigan 33/	U-11495	Detroit Edison
2000	Delaware 24/	99-466	Tidewater Utilities
2000	New Mexico 34/	3008	US WEST Communications, Inc.
2000	Florida 28/	990649-TP	BellSouth -Florida
2000	New Jersey 1/	WR30174	Consumer New Jersey Water
2000	Pennsylvania 3/	R-00994868	Philadelphia Suburban Water
2000	Pennsylvania 3/	R-0005212	Pennsylvania American Sewerage
2000	Connecticut 25/	00-07-17	Southern New England Telephone
2001	Kentucky 36/	2000-373	Jackson Energy Cooperative
2001	Kansas 38/39/40/	01-WSRE-436-RTS	Western Resources
2001	South Carolina 22/	2001-93-E	Carolina Power & Light Co.
2001	North Dakota 37/	PU-400-00-521	Northern States Power/Xcel Energy
2001	Indiana 29/41/	41746	Northern Indiana Power Company
2001	New Jersey 1/	GR01050328	Public Service Electric and Gas
2001	Pennsylvania 3/	R-00016236	York Water Company
2001	Pennsylvania 3/	R-00016339	Pennsylvania America Water
2001	Pennsylvania 3/	R-00016356	Wellsboro Electric Coop.
2001	Florida 4/	010949-EL	Gulf Power Company
2001	Hawaii 42/	00-309	The Gas Company
2002	Pennsylvania 3/	R-00016750	Philadelphia Suburban

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2002	Nevada 43/	01-10001 &10002	Nevada Power Company
2002	Kentucky 36/	2001-244	Fleming Mason Electric Coop.
2002	Nevada 43/	01-11031	Sierra Pacific Power Company
2002	Georgia 27/	14361-U	BellSouth-Georgia
2002	Alaska 44/	U-01-34,82-87,66	Alaska Communications Systems
2002	Wisconsin 45/	2055-TR-102	CenturyTel
2002	Wisconsin 45/	5846-TR-102	TelUSA
2002	Vermont 46/	6596	Citizen's Energy Services
2002	North Dakota 37/	PU-399-02-183	Montana Dakota Utilities
2002	Kansas 38/	02-MDWG-922-RTS	Midwest Energy
2002	Kentucky 36/	2002-00145	Columbia Gas
2002	Oklahoma 47/	200200166	Reliant Energy ARKLA
2002	New Jersey 1/	GR02040245	Elizabethtown Gas Company
2003	New Jersey 1/	ER02050303	Public Service Electric and Gas Co.
2003	Hawaii 42/	01-0255	Young Brothers Tug & Barge
2003	New Jersey 1/	ER02080506	Jersey Central Power & Light
2003	New Jersey 1/	ER02100724	Rockland Electric Co.
2003	Pennsylvania 3/	R-00027975	The York Water Co.
2003	Pennsylvania 3/	R-00038304	Pennsylvania-American Water Co.
2003	Kansas 20/ 40/	03-KGSG-602-RTS	Kansas Gas Service
2003	Nova Scotia, CN 49/	EMO NSPI	Nova Scotia Power, Inc.
2003	Kentucky 36/	2003-00252	Union Light Heat & Power
2003	Alaska 44/	U-96-89	ACS Communications, Inc.
2003	Indiana 29/	42359	PSI Energy, Inc.
2003	Kansas 20/ 40/	03-ATMG-1036-RTS	Atmos Energy
2003	Florida 50/	030001-E1	Tampa Electric Company
2003	Maryland 51/	8960	Washington Gas Light
2003	Hawaii 42/	02-0391	Hawaiian Electric Company
2003	Illinois 28/	02-0864	SBC Illinois
2003	Indiana 28/	42393	SBC Indiana
2004	New Jersey 1/	ER03020110	Atlantic City Electric Co.
2004	Arizona 26/	E-01345A-03-0437	Arizona Public Service Company
2004	Michigan 27/	U-13531	SBC Michigan
2004	New Jersey 1/	GR03080683	South Jersey Gas Company
2004	Kentucky 36/	2003-00434,00433	Kentucky Utilities, Louisville Gas & Electric
2004	Florida 50/ 54/	031033-E1	Tampa Electric Company
2004	Kentucky 36/	2004-00067	Delta Natural Gas Company
2004	Georgia 23/	18300, 15392, 15393	Georgia Power Company
2004	Vermont 46/	6946, 6988	Central Vermont Public Service Corporation
2004	Delaware 24/	04-288	Delaware Electric Cooperative
2004	Missouri 58/	ER-2004-0570	Empire District Electric Company
2005	Florida 50/	041272-EI	Progress Energy Florida, Inc.
2005	Florida 50/	041291-EI	Florida Power & Light Company

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2005	California 59/	A.04-12-014	Southern California Edison Co.
2005	Kentucky 36/	2005-00042	Union Light Heat & Power
2005	Florida 50/	050045 & 050188-EI	Florida Power & Light Co.
2005	Kansas 38/ 40/	05-WSEE-981-RTS	Westar Energy, Inc.

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**PARTICIPATION AS NEGOTIATOR IN FCC TELEPHONE DEPRECIATION  
RATE REPRESRIPTION CONFERENCES**

<u>COMPANY</u>	<u>YEARS</u>	<u>CLIENT</u>
Diamond State Telephone Co. <u>24/</u>	1985 + 1988	Delaware Public Service Comm
Bell Telephone of Pennsylvania <u>3/</u>	1986 + 1989	PA Consumer Advocate
Chesapeake & Potomac Telephone Co. - Md. <u>8/</u>	1986	Maryland People's Counsel
Southwestern Bell Telephone – Kansas <u>20/</u>	1986	Kansas Corp. Commission
Southern Bell – Florida <u>4/</u>	1986	Florida Consumer Advocate
Chesapeake & Potomac Telephone Co.-W.Va. <u>2/</u>	1987 + 1990	West VA Consumer Advocate
New Jersey Bell Telephone Co. <u>1/</u>	1985 + 1988	New Jersey Rate Counsel
Southern Bell - South Carolina <u>22/</u>	1986 + 1989 + 1992	S. Carolina Consumer Advocate
GTE-North – Pennsylvania <u>3/</u>	1989	PA Consumer Advocate

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**PARTICIPATION IN PROCEEDINGS WHICH WERE  
SETTLED BEFORE TESTIMONY WAS SUBMITTED**

<u>STATE</u>	<u>DOCKET NO.</u>	<u>UTILITY</u>
Maryland <u>8/</u>	7878	Potomac Edison
Nevada <u>21/</u>	88-728	Southwest Gas
New Jersey <u>1/</u>	WR90090950J	New Jersey American Water
New Jersey <u>1/</u>	WR900050497J	Elizabethtown Water
New Jersey <u>1/</u>	WR91091483	Garden State Water
West Virginia <u>2/</u>	91-1037-E	Appalachian Power Co.
Nevada <u>21/</u>	92-7002	Central Telephone - Nevada
Pennsylvania <u>3/</u>	R-00932873	Blue Mountain Water
West Virginia <u>2/</u>	93-1165-E-D	Potomac Edison
West Virginia <u>2/</u>	94-0013-E-D	Monongahela Power
New Jersey <u>1/</u>	WR94030059	New Jersey American Water
New Jersey <u>1/</u>	WR95080346	Elizabethtown Water
New Jersey <u>1/</u>	WR95050219	Toms River Water Co.
Maryland <u>8/</u>	8796	Potomac Electric Power Co.
South Carolina <u>22/</u>	1999-077-E	Carolina Power & Light Co.
South Carolina <u>22/</u>	1999-072-E	Carolina Power & Light Co.
Kentucky <u>36/</u>	2001-104 & 141	Kentucky Utilities, Louisville Gas and Electric
Kentucky <u>36/</u>	2002-485	Jackson Purchase Energy Corporation
Florida <u>50/ 54/</u>	030157-EI	Progress Energy Florida

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Clients

<u>1/</u> New Jersey Rate Counsel/Advocate	<u>33/</u> Michigan Attorney General
<u>2/</u> West Virginia Consumer Advocate	<u>34/</u> New Mexico Attorney General
<u>3/</u> Pennsylvania OCA	<u>35/</u> Environmental Protection Agency Enforcement Staff
<u>4/</u> Florida Office of Public Advocate	<u>36/</u> Kentucky Attorney General
<u>5/</u> Toms River Fire Commissioner's	<u>37/</u> North Dakota Public Service Commission
<u>6/</u> Iowa Office of Consumer Advocate	<u>38/</u> Kansas Industrial Group
<u>7/</u> D.C. People's Counsel	<u>39/</u> City of Wichita
<u>8/</u> Maryland's People's Counsel	<u>40/</u> Kansas Citizens' Utility Rate Board
<u>9/</u> Idaho Public Service Commission	<u>41/</u> NIPSCO Industrial Group
<u>10/</u> Western Burglar and Fire Alarm	<u>42/</u> Hawaii Division of Consumer Advocacy
<u>11/</u> U.S. Dept. of Defense	<u>43/</u> Nevada Bureau of Consumer Protection
<u>12/</u> N.M. State Corporation Comm.	<u>44/</u> GCI
<u>13/</u> City of Philadelphia	<u>45/</u> Wisc. Citizens' Utility Rate Board
<u>14/</u> Resorts International	<u>46/</u> Vermont Department of Public Service
<u>15/</u> Woodlake Condominium Association	<u>47/</u> Oklahoma Corporation Commission
<u>16/</u> Illinois Attorney General	<u>48/</u> National Association of Utility Consumer Advocates
<u>17/</u> Mass Coalition of Municipalities	<u>49/</u> Nova Scotia Utility and Review Board
<u>18/</u> U.S. Department of Energy	<u>50/</u> Florida Office of Public Counsel
<u>19/</u> Arizona Electric Power Corp.	<u>51/</u> Maryland Public Service Commission
<u>20/</u> Kansas Corporation Commission	<u>52/</u> MCI
<u>21/</u> Public Service Comm. – Nevada	<u>53/</u> Transmission Agency of Northern California
<u>22/</u> SC Dept. of Consumer Affairs	<u>54/</u> Florida Industrial Power Users Group
<u>23/</u> Georgia Public Service Comm.	<u>55/</u> Sierra Club
<u>24/</u> Delaware Public Service Comm.	<u>56/</u> Our Children's Earth Foundation
<u>25/</u> Conn. Ofc. Of Consumer Counsel	<u>57/</u> National Parks Conservation Association, Inc.
<u>26/</u> Arizona Corp. Commission	<u>58/</u> Missouri Office of the Public Counsel
<u>27/</u> AT&T	<u>59/</u> The Utility Reform Network
<u>28/</u> AT&T/MCI	
<u>29/</u> IN Office of Utility Consumer Counselor	
<u>30/</u> Unitel (AT&T – Canada)	
<u>31/</u> Public Interest Advocacy Centre	
<u>32/</u> U.S. General Services Administration	